



PATENT
Docket No. 287.00070101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant(s): Robellard et al.)	Group Art Unit:	3781
)		
Serial No.: 10/758,626)	Examiner:	Stephen J. Castellano
Confirmation No. 6109)		
)		
Filed: January 15, 2004)		

For: RESEALABLE CONTAINERS HAVING INTERNAL ROLLER SURFACE

APPEAL BRIEF

Commissioner for Patents
Mail Stop - Appeal Brief - Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Brief is presented in support of the Notice of Appeal (dated May 13, 2008) from the final rejection of claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 (with claim 17 having been withdrawn from consideration) of the above identified application (Final Office Action dated February 13, 2008) under 37 C.F.R. §§ 1.113 and 1.191.

This Brief is being submitted as set forth in 37 C.F.R. § 41.37. Please charge Deposit Account No. 13-4895 the fee for filing this Brief under 37 C.F.R. § 41.20(b)(2).

I. REAL PARTY IN INTEREST

The real party in interest of the above-identified patent application is the assignee, Valspar Sourcing, Inc., as evidenced by the assignments recorded August 24, 2004 at Reel 015081, Frames 0243 and 0281.

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II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known that would directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-35 were filed in this application. Claims 36-40 have been previously added, and claims 8-9, 11, 19-20, 23-25, 28, 31, 34-35, and 39 have been previously canceled without prejudice. As such, the pending claims are claims 1-7, 10, 12-18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 (with claim 17 having been withdrawn from consideration).

Claims 30, 32, 38, and 40 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Hanssen (U.S. Patent No. 3,825,970). *See Final Office Action*, February 13, 2008, page 2.

Claims 30, 32, and 40 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Dumesnil, Jr. (U.S. Patent No. 4,107,815). *See Final Office Action*, February 13, 2008, page 3.

Claims 33 and 38 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumesnil, Jr. in view of Bedrossian (U.S. Patent No. 5,314,061). *See Final Office Action*, February 13, 2008, page 4.

Claims 1-7, 10, 12-16, 18, 26-27, 29, and 36-37 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumesnil, Jr. in view of Bedrossian and Keller (U.S. Patent App. Pub. No. 2003/0074760). *See Final Office Action*, February 13, 2008, page 4.

Claims 21-22 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumesnil, Jr. in view of Bedrossian and Keller as applied to claim 1, and further in view of Carling et al. (U.S. Patent No. 5,992,106). *See Final Office Action*, February 13, 2008, page 6.

Claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 stand finally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over the claim of U.S. Patent No. D524501 to Prokop et al. in view of Bedrossian. *See Final Office Action*, February 13, 2008, pages 6-7.

Claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 stand finally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over the claim of U.S. Patent No. D524003 to Prokop et al. in view of Bedrossian. *See Final Office Action*, February 13, 2008, page 7.

Thus, the rejections of claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are appealed.

IV. STATUS OF AMENDMENTS

There are no amendments to the above-identified patent application that have been filed by the Appellants subsequent to the issuance of the Final Office Action, dated February 13, 2008.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In one embodiment of the invention, according to claim 1, a container (e.g., Figures 11 and 13: container 200, Specification: page 14, lines 11-18) is recited. The container recited in claim 1 includes: a one-piece container body comprising a sloped floor (e.g., Figure 18: floor 234, Specification: page 18, lines 4-7) and at least one pair of opposing sidewalls (e.g., Figure 13: pairs of opposing sidewalls 230, 232, Specification: page 15, lines 18-21), the sloped floor and the at least one pair of opposing sidewalls defining a reservoir operable to hold a designated volume of liquid (e.g., Figure 18, Specification: page 14, lines 13-14); a lid (e.g., Figures 11-12: lid 204, Specification: page 14, lines 14-18) to cover an open top of the container body and to form a relatively tight seal therewith; and a perforated first roller surface (e.g., Figures 13 and 16-17: roller surface 254, Specification: page 6, lines 4-11, page 15, lines 24-29) pivotally coupled to the at least one pair of opposing sidewalls (e.g., Figures 13 and 17, Specification: page 16, lines 28-29), the first roller surface being pivotable between a first position (e.g., Figure 13) and a second position (e.g., Figure 17), wherein, when the first roller surface is in the first position (e.g., Figure 13), a substantial portion of the first roller surface is located within the reservoir above the designated volume of liquid (e.g., Figure 18) and substantially between the at least one pair of opposing sidewalls.

In a further embodiment of the invention, according to claim 26, an article is recited. The article recited in claim 26 includes a designated volume of liquid (e.g., Figure 18: liquid L) and a container (e.g., Figures 11 and 13: container 200, Specification: page 14, lines 11-18). The

container recited in claim 26 includes a container body for receiving and storing the designated volume of liquid (e.g., Figure 13: body 202, Specification: page 14, lines 12-13), wherein the container body comprises a plurality of sidewalls (e.g., Figure 13: pairs of opposing sidewalls 230, 232, Specification: page 15, lines 18-21) and a floor (e.g., Figure 18: floor 234, Specification: page 18, lines 4-7), the plurality of sidewalls defining an opening of the container body; a removable and resealable lid (e.g., Figures 11-12: lid 204, Specification: page 14, lines 15-18) operable to form a relatively tight seal with the container body and to selectively cover the opening (e.g., Specification: page 7, lines 10-17); and a perforated first roller surface (e.g., Figures 13 and 16-17: roller surface 254, Specification: page 6, lines 4-11, page 15, lines 24-29) pivotally coupled to the container body (e.g., Specification: page 6, lines 12-15) and positioned between two or more sidewalls of the plurality of sidewalls, wherein the first roller surface is, when in a first position (e.g., Figure 13), located above the designated volume of liquid and below an uppermost edge of the container body (e.g., Figure 18).

In a further embodiment of the invention, according to claim 30, a container (e.g., Figures 11 and 13: container 200, Specification: page 14, lines 11-18) is recited. The container recited in claim 30 includes: a one-piece container body defining a partially enclosed reservoir having an open top, the reservoir for receiving and storing a designated volume of liquid (e.g., Figures 13 and 18: body 202, Specification: page 14, lines 1-18); and a first roller surface (e.g., Figures 13 and 16-17: roller surface 254, Specification: page 15, lines 24-29) for distributing liquid over a roller-type liquid applicator (e.g., Specification: page 6, lines 6-9), the first roller surface pivotally coupled to the container body (e.g., Specification: page 6, lines 13-15), wherein the first roller surface is, when in a first position (e.g., Figure 13, Specification: page 17, lines 8-11), located within the reservoir at a level above the designated volume of liquid and below the open top (e.g., Figure 18, Specification: page 13, lines 4-6), and is further positioned about 70 degrees to about 110 degrees from vertical (e.g., Specification: page 12, lines 1-4).

In a further embodiment of the invention according to dependent claim 33, the container further comprises a selectively removable lid operable to seal the open top (e.g., Figure 11: lid 204, Specification: page 18, lines 4-7).

In a further embodiment of the invention, according to claim 38, a container (e.g., Figures 11 and 13: container 200, Specification: page 14, lines 11-18) is recited. The container recited in claim 38 includes: a one-piece container body comprising a floor (e.g., Figure 18: floor 234, Specification: page 18, lines 4-7) and at least one pair of opposing sidewalls (e.g., Figure 13: pairs of opposing sidewalls 230, 232, Specification: page 15, lines 18-21), the floor and the at least one pair of opposing sidewalls defining a reservoir operable to hold a designated volume of liquid (e.g., Specification: page 14, lines 11-14); and a first roller surface (e.g., Figures 13 and 16-17: roller surface 254, Specification: page 15, lines 24-29) for distributing liquid over a roller-type liquid applicator (e.g., Figure 18: applicator 170, Specification: page 19, lines 5-7), the first roller surface pivotally coupled to the at least one pair of opposing sidewalls (e.g., Figures 13 and 17), wherein, when the first roller surface is in a first position (e.g., Figures 13 and 18) in which the first roller surface faces upwardly and away from the floor, the first roller surface: is located within the reservoir above the designated volume of liquid (e.g., Figure 18); spans substantially between the at least one pair of opposing sidewalls (e.g., Figure 13: sidewalls 230); and defines an access zone for accessing liquid in the container by the roller-type liquid applicator (e.g., Figure 13: access zone 218, Specification: page 16, lines 8-11).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Whether claims 30, 32, 38, and 40 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Hanssen (U.S. Patent No. 3,825,970).
- B. Whether claims 30, 32, and 40 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Dumesnil, Jr. (U.S. Patent No. 4,107,815).
- C. Whether claims 33 and 38 are unpatentable under 35 U.S.C. § 103(a) over Dumesnil, Jr. in view of Bedrossian (U.S. Patent No. 5,314,061).
- D. Whether claims 1-7, 10, 12-16, 18, 26-27, 29, and 36-37 are unpatentable under 35 U.S.C. § 103(a) over Dumesnil, Jr. in view of Bedrossian and Keller (U.S. Patent App. Pub. No. 2003/0074760).

- E. Whether claims 21-22 are unpatentable under 35 U.S.C. § 103(a) over Dumesnil, Jr. in view of Bedrossian and Keller as applied to claim 1, and further in view of Carling et al. (U.S. Patent No. 5,992,106).
- F. Whether claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are unpatentable on the ground of non-statutory obviousness-type double patenting over the claim of U.S. Patent No. D524501 to Prokop et al. in view of Bedrossian.
- G. Whether claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are unpatentable on the ground of non-statutory obviousness-type double patenting over the claim of U.S. Patent No. D524003 to Prokop et al. in view of Bedrossian.

VII. ARGUMENT

A. Claims 30, 32, 38, and 40 are not anticipated under 35 U.S.C. § 102(b) by Hanssen (U.S. Patent No. 3,825,970).

It is well established that to sustain a rejection under 35 U.S.C. § 102(b), a single prior art reference must teach every element of the claim. *See* M.P.E.P. § 2131, 8th Edition, Rev. 6, September 2007. Appellants assert that, for at least the reasons presented below, Hanssen fails to teach, or even suggest, every element of rejected claims 30, 32, 38, and 40, and thus review and reversal of the rejection are requested.

1. Independent claim 30 and dependent claims 32 and 40

Appellants assert that, at a minimum, Hanssen does not teach, or even suggest, a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claim 30 as required for anticipation. Rather, Hanssen describes a paint roller retaining frame having an integral spray shield for "application of paint to ceiling surfaces as well as wall surfaces." *See Hanssen*, Figures 1-2, Specification: column 1, lines 6-8 and 32-34.

Nonetheless, the Examiner asserts that "the inside surface of the elongated cylinder has a first roller surface (a small longitudinal strip of the inside surface of cylinder)." *Final Office Action*, February 13, 2008, page 2. The Examiner further clarified such assertion in the

Interview Summary sent September 21, 2007 stating that "Hanssen is being applied such that the inner surface of the cylinder of the roller is being read as the surface which faces upwardly, this surface is not exposed to the paint or liquid within the shield." *Interview Summary*, sent September 21, 2007 (emphasis added).

Appellants submit that the inside/inner surface 35 of the elongated cylinder 34, which is not exposed to paint or liquid, of Hanssen is clearly not a "roller surface" as the latter is explicitly recited in claim 30. For convenience, Figures 1 and 2 of Hanssen are reproduced below.

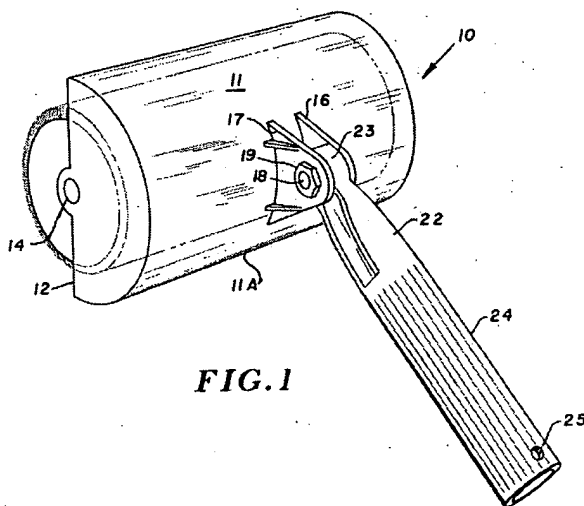


FIG. 1

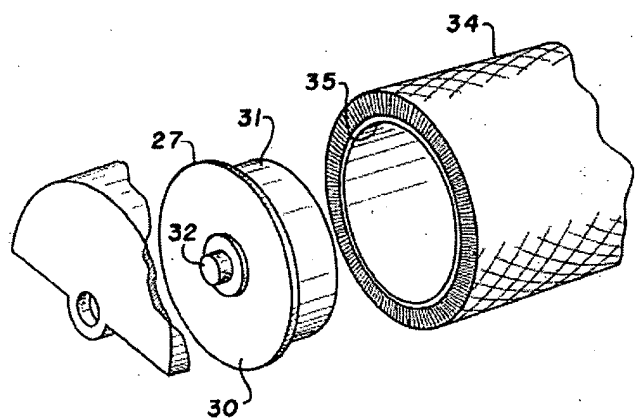


FIG. 2

Figures 1 & 2 of Hanssen.

Clearly, the inner surface 35 of Hanssen, as shown in Figure 2 of Hanssen, cannot be equated to a "roller surface" as claimed.

Nonetheless, claim 30 was amended in the Amendment and Response dated November 30, 2007 to further recite that the first roller surface is "for distributing liquid over a roller-type liquid applicator" in response to the Office Action dated July 31, 2007 and in accordance with the substance of the Examiner Interview conducted September 12, 2007. The inner surface 35 of the roller of Hanssen is clearly not "for distributing liquid over a roller-type liquid applicator." In fact, the roller 34 itself (of Hanssen) is not "for distributing liquid over a roller-type liquid

applicator"— instead, the roller 34 is for "application of paint to ceiling surfaces as well as wall surfaces." *See Hanssen*, Specification: column 1, lines 32-34.

However, the Examiner has chosen not to address this recitation (i.e., for distributing liquid over a roller-type liquid applicator) of claim 30 as shown in the excerpt from the Final Office Action reproduced below:

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, 'This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing.' Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 [Amendment], this rejection is maintained.
Final Office Action, February 13, 2008, page 3.

Appellants submit that Examiner's inaction is improper. It is well established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Further, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970) (emphasis added). Appellants submit that the Examiner has failed to identify a first roller surface for distributing liquid over a roller-type liquid applicator within Hanssen as required for a proper anticipation rejection of claim 30.

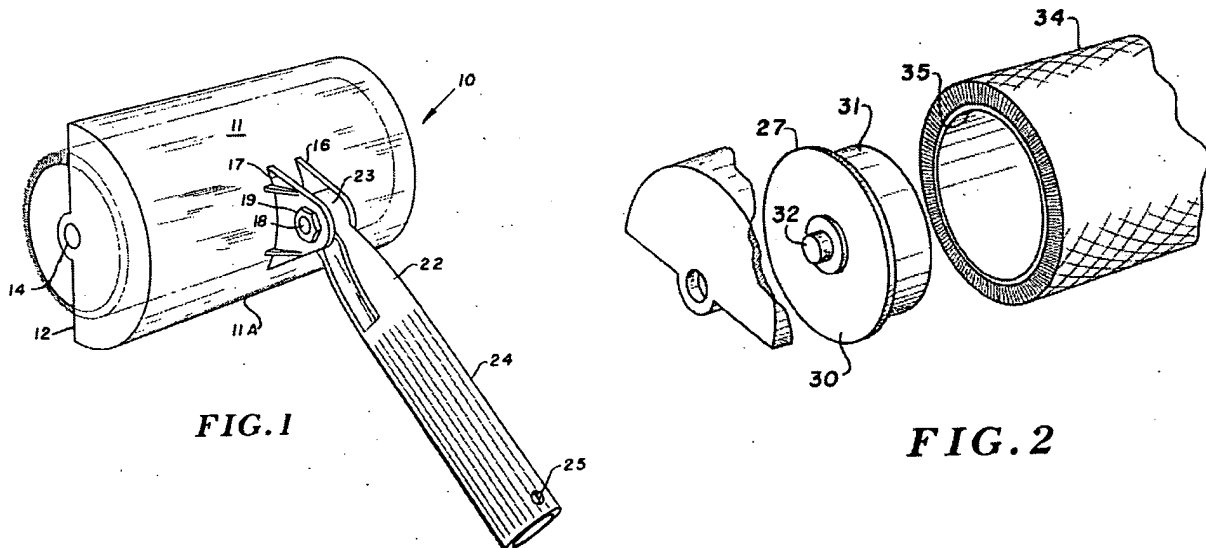
Therefore, Hanssen does not teach, or for that matter even suggest, a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claim 30. Thus, Appellants respectfully submit that Hanssen fails to anticipate claims 30, 32, and 40. Review and reversal of this rejection of claims 30, 32, and 40 are, therefore, respectfully requested.

2. Independent claim 38

Appellants assert that, at a minimum, Hanssen does not teach, or even suggest, a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claim 38 as

required for anticipation. Rather, Hanssen describes a paint roller retaining frame having an integral spray shield for "application of paint to ceiling surfaces as well as wall surfaces." *See Hanssen*, Figures 1-2, Specification: column 1, lines 6-8, 32-34. The Examiner asserts that "the inside surface of the elongated cylinder has a first roller surface (a small longitudinal strip of the inside surface of cylinder)." *Final Office Action*, February 13, 2008, page 2. As stated above, the Examiner clarified this assertion in the Interview Summary sent September 21, 2007 stating that "Hanssen is being applied such that the inner surface of the cylinder of the roller is being read as the surface which faces upwardly, this surface is not exposed to the paint or liquid within the shield." *Interview Summary*, sent September 21, 2007 (emphasis added).

Appellants submit that the inside/inner surface 35 of the elongated cylinder 34, which is not exposed to paint or liquid, of Hanssen is clearly not a "roller surface" as the latter is explicitly recited in claim 38. For convenience, Figures 1 and 2 of Hanssen are reproduced below.



Figures 1 & 2 of Hanssen.

Clearly, the inner surface 35 of Hanssen, as shown in Figure 2 of Hanssen, cannot be equated to the "roller surface" as claimed.

Nonetheless, claim 38 was amended in the Amendment and Response dated November 30, 2007 to further recite that the first roller surface is "for distributing liquid over a roller-type liquid applicator" in response to the Office Action dated July 31, 2007 and in accordance with the substance of the Examiner Interview conducted September 12, 2007. The inner surface 35 of the roller of Hanssen is clearly not "for distributing liquid over a roller-type liquid applicator." In fact, the roller 34 itself (of Hanssen) is not "for distributing liquid over a roller-type liquid applicator"—instead, the roller 34 is for "application of paint to ceiling surfaces as well as wall surfaces." *See Hanssen*, Specification: column 1, lines 32-34.

However, the Examiner has chosen not to address this recitation (i.e., for distributing liquid over a roller-type liquid applicator) of claim 38 as shown in the excerpt from the Final Office Action reproduced below:

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, 'This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing.' Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 [Amendment], this rejection is maintained.
Final Office Action, February 13, 2008, page 3.

Appellants submit that the Examiner's inaction is improper. It is well established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Further, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970) (emphasis added). Appellants submit that the Examiner has failed to identify a first roller surface for distributing liquid over a roller-type liquid applicator within Hanssen as required for a proper anticipation rejection of claim 38.

Further, Appellants assert that Hanssen does not teach, or even suggest, a first roller surface that defines an access zone for accessing liquid in the container by a roller-type liquid

applicator as recited in claim 38 as required for anticipation. Figure 1 (reproduced below) of Hanssen shows that a gap exists between the casing means 11 and the roller.

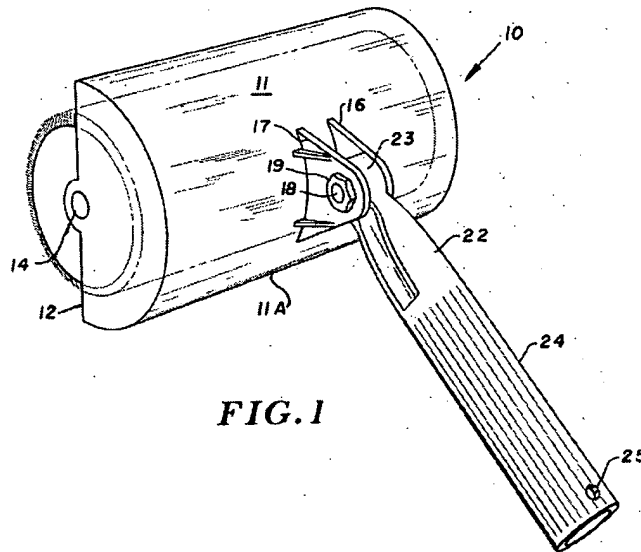


Figure 1 of Hanssen.

Such a "gap," however, is clearly not an access zone for accessing liquid in the container by a roller-type liquid applicator. In fact, it is not clear how the "gap" could possibly be used as an access zone for accessing liquid by a roller-type liquid applicator.

Therefore, Hanssen does not teach, or for that matter even suggest, a first roller surface for distributing liquid over a roller-type liquid applicator or a first roller surface that defines an access zone for accessing liquid in the container by a roller-type liquid applicator as recited in claim 38. Thus, Appellants respectfully submit that Hanssen fails to anticipate claim 38. Review and reversal of this rejection of claim 38 are, therefore, respectfully requested.

B. Claims 30, 32, and 40 are not anticipated under 35 U.S.C. § 102(b) by Dumesnil, Jr. (U.S. Patent No. 4,107,815).

It is well established that to sustain a rejection under 35 U.S.C. § 102(b), a single prior art reference must teach every element of the claim. *See* M.P.E.P. § 2131, 8th Edition, Rev. 6,

September 2007. Appellants assert that, for at least the reasons presented below, Dumesnil, Jr. fails to teach, or even suggest, every element of rejected claims 30, 32, and 40, and thus review and reversal of this rejection are requested.

Appellants assert that, at a minimum, Dumesnil, Jr. does not teach, or even suggest, a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claim 30 as required for anticipation. Rather, Dumesnil, Jr. describes "a paint tray . . . , a paint transfer roller, and mount means for rotatably supporting said paint transfer roller on said paint tray." *Dumesnil, Jr.*, Figure 2, Specification: column 1, lines 34-37. The Examiner equates "part of the outer surface of the transfer roller" 14 to the claimed roller surface. *Final Office Action*, February 13, 2008, page 3. The transfer roller 14 of Dumesnil, Jr. (as shown in Figure 2 reproduced below) clearly does not have a first roller surface as required to anticipate independent claim 30.

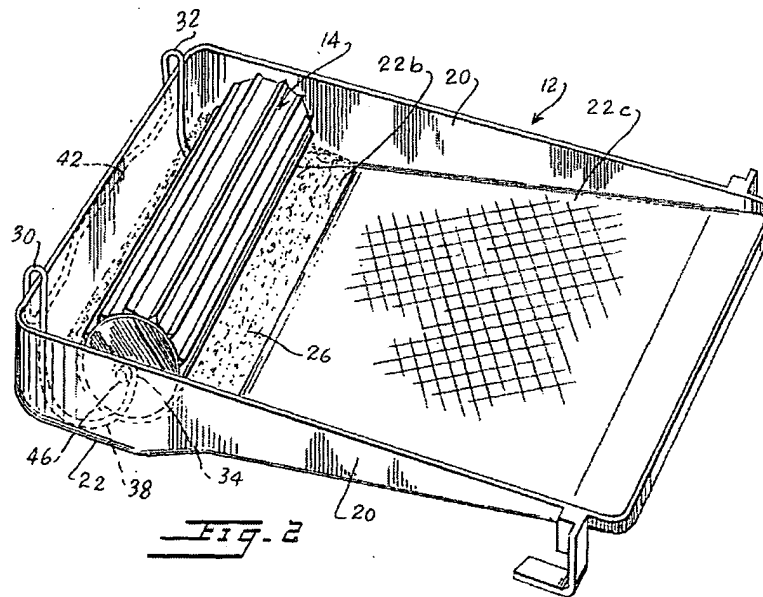


Figure 2 of Dumesnil, Jr.

Nonetheless, independent claim 30 was amended in the Amendment and Response dated November 30, 2007 to further recite that the first roller surface is "for distributing liquid over a

roller-type liquid applicator" in response to the Office Action dated July 31, 2007 and in accordance with the substance of the Examiner Interview conducted September 12, 2007. The transfer roller 14 of Dumesnil, Jr. is clearly not for distributing liquid over a roller-type liquid applicator. Instead, the transfer roller 14 of Dumesnil, Jr. is expressly described as being for "applying paint to pad painters." *Dumesnil, Jr.*, Figure 5, Specification: column 1, lines 32-33.

However, the Examiner has chosen not to address this recitation (i.e., for distributing liquid over a roller-type liquid applicator) of claim 30 as shown in the excerpt from the Final Office Action reproduced below:

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, 'This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing.' Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 [Amendment], this rejection is maintained.
Final Office Action, February 13, 2008, pages 3-4.

Appellants submit that the Examiner's inaction is improper. It is well established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Further, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970) (emphasis added). Appellants submit that the Examiner has failed to identify a first roller surface for distributing liquid over a roller-type liquid applicator within Dumesnil, Jr. as required for a proper anticipation rejection of claims 30, 32, and 40.

The Examiner further stated that "[i]f it should be deemed that the amendment does narrow the claim, this rejection is still maintained. Dumesnil's first roller surface is fully capable of distributing liquid over a roller-type liquid applicator." *Final Office Action*, February 13, 2008, page 4 (*see also Final Office Action*, February 13, 2008, page 7). Dumesnil, Jr., however, does not teach or even suggest that the transfer roller 14 is "fully capable" of distributing liquid

over a roller-type liquid applicator. As a result, it appears that the Examiner is basing this anticipation rejection on an allegedly inherent teaching of the cited reference (although this is not explicitly stated in the Final Office Action).

The requirements for an anticipation rejection based on inherency, however, have not been met.

"The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." M.P.E.P. § 2112(IV), 8th Edition, Rev. 6, September 2007 (emphasis in original). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." M.P.E.P. § 2112(IV), 8th Edition, Rev. 6, September 2007, *citing In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." M.P.E.P. § 2112(IV), 8th Edition, Rev. 6, September 2007, *citing Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

No basis in fact and/or technical reasoning has been provided to reasonably support that the alleged inherent characteristic (i.e., that the transfer roller 14 is capable of distributing liquid over a roller-type liquid applicator) necessarily flows from the teachings of Dumesnil, Jr. as required for an anticipation rejection based on inherency. In fact, Appellants assert that the transfer roller of Dumesnil, Jr. would not even appear to function to transfer paint to a roller-type liquid applicator as there is no apparent means to ensure differential rolling between the transfer roller and the applicator. For example, to transfer paint, the transfer roller 14 of Dumesnil, Jr. rotates ("In the use of this device, a standard pad painter is moved across the paint transfer roller, thereby causing said roller to rotate in the paint and to carry the paint into contact with the pad painter. This means provides a simple and effective way to transfer paint from a conventional paint tray to the pad painter." *Dumesnil, Jr.*, Specification: column 2, lines 6-11, Figure 5). While effective for a planar pad painter, it is unclear how a roller-type liquid applicator, while

simultaneously rotating along with the transfer roller, would be able to impart the desired rotational movement to the freely-rotatable transfer roller 14 of Dumesnil, Jr. Stated alternatively, the ability to transfer paint from one freely-rotatable cylindrical object, i.e., transfer roller 14, to another freely-rotatable cylindrical object, i.e., a roller of a roller-type liquid applicator, is unclear and unexplained by the Examiner.

Therefore, Dumesnil, Jr. does not teach, or for that matter even suggest, a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claim 30. Thus, Appellants respectfully submit that Dumesnil, Jr. fails to anticipate claims 30, 32, and 40. Review and reversal of this rejection of claims 30, 32, and 40 are, therefore, respectfully requested.

C. Claims 33 and 38 are not unpatentable under 35 U.S.C. § 103(a) over Dumesnil, Jr. (U.S. Patent No. 4,107,815) in view of Bedrossian (U.S. Patent No. 5,314,061).

"[T]he question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02 (I), 8th Edition, Rev. 6, September 2007 (emphasis in original, citations omitted). "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." M.P.E.P. § 2141(III), 8th Edition, Rev. 6, September 2007.

The Final Office Action states the following: "Dumesnil discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out." *Final Office Action*, February 13, 2008, page 4. As such, the Final Office Action appears to present Bedrossian merely to provide "a lid."

1. Dependent claim 33

Appellants assert that, at a minimum, Dumesnil, Jr. in view of Bedrossian does not teach or suggest all the recitations of claim 33 as required to establish *prima facie* obviousness.

For example, claim 33 recites "a selectively removable lid operable to seal the open top." The lid of Bedrossian cannot seal the open top of Dumesnil, Jr. because the interconnect hooks 30, 32 extend above the walls 18, 20 of the tray (as shown in Figure 2 reproduced below).

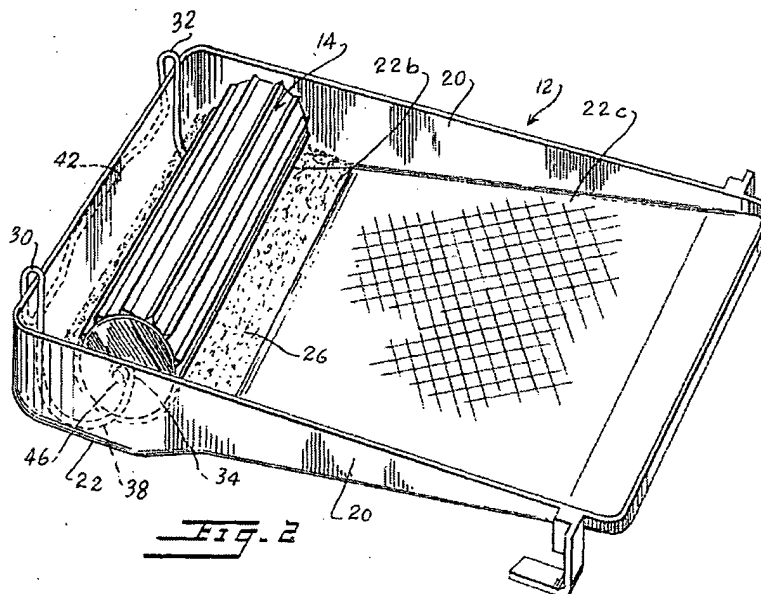


Figure 2 of Dumesnil, Jr.

Appellants requested clarification on this matter within the Amendment and Response dated November 30, 2007 and the Examiner responded in the Final Office Action stating that "the lid can be applied to the upper edge after hooks 30, 32 are removed to tightly seal the lid without interference. Also the sealing plugs 50 of Bedrossian are effective in sealing the slots made for hooks 30, 32." *Final Office Action*, February 13, 2008, page 7.

If the hooks 30, 32, which are attached to the transfer roller 14 (which is being equated to the claimed roller surface), are removed as suggested by the Examiner, the transfer roller 14

would no longer be coupled, e.g., "pivotally coupled to the container body," as required to render independent claim 30 (from which claim 33 depends) *prima facie* obvious.

Moreover, it is unclear how the sealing plugs 50 of Bedrossian could seal over the hooks 30, 32 of Dumesnil, Jr. The sealing plugs 50 are designed for a different type of container than the tray of Dumesnil, Jr. and further, are designed for a handle of a paint roller. Such disclosure clearly does not teach or suggest to one having ordinary skill in the art how to configure the combination of the tray of Dumesnil, Jr. with the lid of Bedrossian such that a seal is established over the hooks 30, 32.

Still further, Appellants assert that no reasonable expectation of success exists to combine the paint tray of Dumesnil, Jr. with the lid of Bedrossian as required to establish *prima facie* obviousness. "The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success." M.P.E.P. § 2143.02(I), 8th Edition, Rev. 6, September 2007, citing *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). As previously described, the interconnect hooks 30, 32 extend above the walls 18, 20 of the tray of Dumesnil, Jr. obstructing the lid of Bedrossian from sealing. As a result, a person having ordinary skill in the art would not find a reasonable expectation of success to combine the lid of Bedrossian with the paint tray of Dumesnil Jr.

Appellants assert that, for at least the above reasons, the disclosure of Dumesnil, Jr. in view of Bedrossian does not render claim 33 obvious. Review and reversal of this rejection of claim 33 are, therefore, respectfully requested.

2. Independent claim 38

Appellants assert that, at a minimum, Dumesnil, Jr. in view of Bedrossian does not teach or suggest all the recitations of claim 38 as required to establish *prima facie* obviousness.

Appellants assert that, at a minimum, Dumesnil, Jr. does not teach or suggest a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claim 38. Rather, Dumesnil, Jr. describes "a paint tray . . . , a paint transfer roller, and mount means for rotatably supporting said paint transfer roller on said paint tray." *Dumesnil, Jr.*, Figure 2, Specification:

column 1, lines 34-37. The Examiner equates a part of the outer surface of the transfer roller 14 to the claimed roller surface. *Final Office Action*, February 13, 2008, page 3. The transfer roller 14 of Dumesnil, Jr. (as shown in Figure 2 reproduced below) clearly does not have a first roller surface as required to support a *prima facie* obviousness rejection of claim 38.

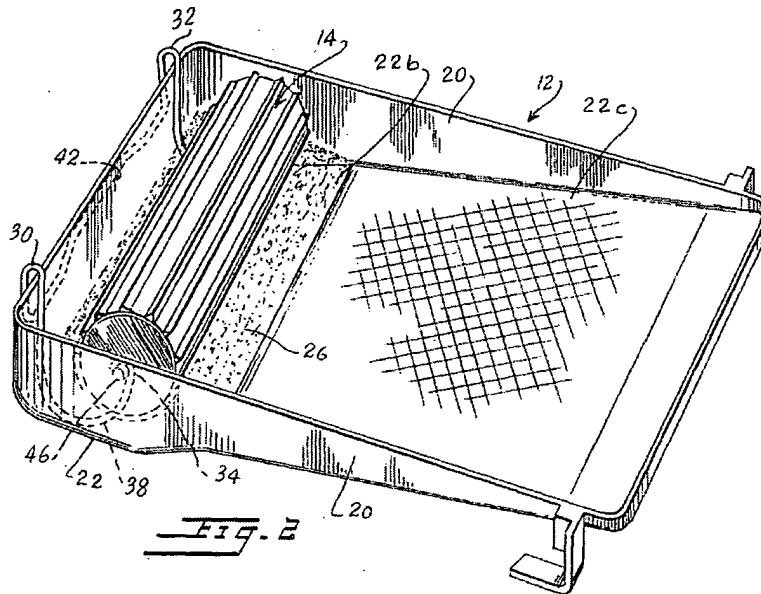


Figure 2 of Dumesnil, Jr.

Nonetheless, independent claim 38 was amended in the Amendment and Response dated November 30, 2007 to further recite that the first roller surface is "for distributing liquid over a roller-type liquid applicator" in response to the Office Action dated July 31, 2007 and in accordance with the substance of the Examiner Interview conducted September 12, 2007. The transfer roller 14 of Dumesnil, Jr. is clearly not for distributing liquid over a roller-type liquid applicator. Instead, the transfer roller 14 of Dumesnil, Jr. is expressly described as being for "applying paint to pad painters." *Dumesnil, Jr.*, Figure 5, Specification: column 1, lines 32-33.

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However, the Examiner has chosen not to address this recitation (i.e., for distributing liquid over a roller-type liquid applicator) of claim 38 as shown in the excerpt from the Final Office Action reproduced below:

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, 'This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing.' Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 [Amendment], this rejection is maintained.
Final Office Action, February 13, 2008, pages 3-4.

Appellants submit that Examiner's inaction is improper. It is well established that "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970) (emphasis added). As a result, Appellants submit that the Examiner has failed to identify a first roller surface for distributing liquid over a roller-type liquid applicator within Dumesnil, Jr. as required for a proper obviousness rejection of claim 38.

The Examiner further stated that "[i]f it should be deemed that the amendment does narrow the claim, this rejection is still maintained. Dumesnil's first roller surface is fully capable of distributing liquid over a roller-type liquid applicator." *Final Office Action*, February 13, 2008, page 4 (see also *Final Office Action*, February 13, 2008, page 7). Dumesnil, Jr., however, does not teach or even suggest that the transfer roller 14 is "fully capable" of distributing liquid over a roller-type liquid applicator. As a result, it appears that the Examiner is basing this obviousness rejection on an allegedly inherent teaching of the cited reference (although this is not explicitly stated in the Final Office Action).

The requirements for an obviousness rejection based on inherency, however, have not been met.

"The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." M.P.E.P. § 2112(IV),

8th Edition, Rev. 6, September 2007 (emphasis in original). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." M.P.E.P. § 2112(IV), 8th Edition, Rev. 6, September 2007, *citing In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." M.P.E.P. § 2112(IV), 8th Edition, Rev. 6, September 2007, *citing Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

No basis in fact and/or technical reasoning has been provided to reasonably support that the alleged inherent characteristic (i.e., that the transfer roller 14 is capable of distributing liquid over a roller-type liquid applicator) necessarily flows from the teachings of Dumesnil, Jr. as required for an anticipation rejection based on inherency. In fact, Appellants assert that the transfer roller of Dumesnil, Jr. would not even appear to function to transfer paint to a roller-type liquid applicator as there is no apparent means to ensure differential rolling between the transfer roller and the applicator. For example, to transfer paint, the transfer roller 14 of Dumesnil, Jr. rotates ("In the use of this device, a standard pad painter is moved across the paint transfer roller, thereby causing said roller to rotate in the paint and to carry the paint into contact with the pad painter. This means provides a simple and effective way to transfer paint from a conventional paint tray to the pad painter." *Dumesnil, Jr.*, Specification: column 2, lines 6-11, Figure 5). While effective for a planar pad painter, it is unclear how a roller-type liquid applicator, while simultaneously rotating along with the transfer roller, would be able to impart the desired rotational movement to the freely-rotatable transfer roller 14 of Dumesnil, Jr. Stated alternatively, the ability to transfer paint from one freely-rotatable cylindrical object, i.e., transfer roller 14, to another freely-rotatable cylindrical object, i.e., a roller of a roller-type liquid applicator, is unclear and unexplained by the Examiner.

Appellants assert that, for at least the above reasons, the disclosure of Dumesnil, Jr. in view of Bedrossian does not render claim 38 obvious. Review and reversal of this rejection of claim 38 are, therefore, respectfully requested.

D. Claims 1-7, 10, 12-16, 18, 26-27, 29, and 36-37 are not unpatentable under 35 U.S.C. § 103(a) over Dumesnil, Jr. (U.S. Patent No. 4,107,815) in view of Bedrossian (U.S. Patent No. 5,314,061) and Keller (U.S. Patent App. Pub. No. 2003/0074760).

E. Claims 21-22 are not unpatentable under 35 U.S.C. § 103(a) over Dumesnil, Jr. (U.S. Patent No. 4,107,815) in view of Bedrossian (U.S. Patent No. 5,314,061) and Keller (U.S. Patent App. Pub. No. 2003/0074760) as applied to claim 1, and further in view of Carling et al. (U.S. Patent No. 5,992,106).

"[T]he question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02(I), 8th Edition, Rev. 6, September 2007 (emphasis in original, citations omitted). "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." M.P.E.P. § 2141(III), 8th Edition, Rev. 6, September 2007.

The Final Office Action states the following: "Dumesnil discloses the invention except for the lid and the roller perforations. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out." *Final Office Action*, February 13, 2008, page 5. As such, the Final Office Action appears to present Bedrossian merely to provide "a lid."

The Final Office Action further states the following: "Keller teaches a roller cover of either open-cell foam or sponge material It would have been obvious to modify the roller to be covered by a perforated material roller cover so that the first roller surface becomes the outer perforated surface." *Final Office Action*, February 13, 2008, page 5. As such, the Final Office appears to present Keller merely to provide "a perforated surface."

Appellants assert that, at a minimum, Dumesnil, Jr. in view of Bedrossian and Keller does not teach or suggest all the recitations of independent claims 1 and 26 as required to establish *prima facie* obviousness.

Appellants assert that, at a minimum, Dumesnil, Jr. does not teach or suggest a roller surface as recited in claims 1 and 26. Rather, Dumesnil, Jr. describes "a paint tray . . . , a paint transfer roller, and mount means for rotatably supporting said paint transfer roller on said paint tray." *Dumesnil, Jr.*, Figure 2, Specification: column 1, lines 34-37. The Examiner equates the transfer roller 14 to the claimed roller surface. *Final Office Action*, February 13, 2008, page 3. The transfer roller 14 of Dumesnil, Jr. (as shown in Figure 2 reproduced below) clearly does not have a roller surface to support a *prima facie* obviousness rejection of independent claims 1 and 26.

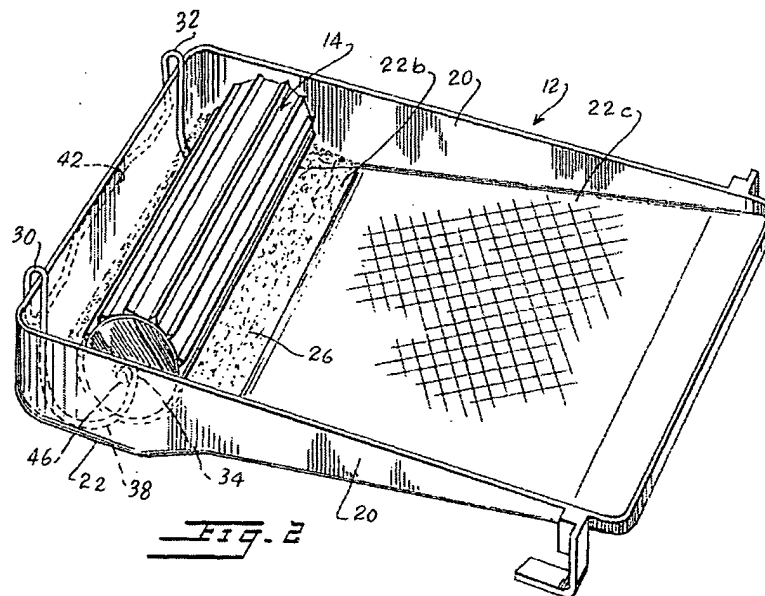


Figure 2 of Dumesnil, Jr.

Further, Appellants assert that Dumesnil Jr. in view of Bedrossian and Keller does not teach or suggest "a lid to cover an open top of the container body and to form a relatively tight seal therewith" as recited in claim 1 or "a removable and resealable lid operable to form a relatively tight seal with the container body and to selectively cover the opening" as recited in

claim 26. The lid of Bedrossian cannot form a relatively tight seal with the open top of Dumesnil, Jr. because the interconnect hooks 30, 32 extend above the walls 18, 20 of the tray.

Appellants requested clarification on this matter within the Amendment and Response dated November 30, 2007 and the Examiner responded in the Final Office Action stating that "the lid can be applied to the upper edge after hooks 30, 32 are removed to tightly seal the lid without interference. Also the sealing plugs 50 of Bedrossian are effective in sealing the slots made for hooks 30, 32." *Final Office Action*, February 13, 2008, page 7.

If the hooks 30, 32, which are attached to the transfer roller 14 (which is being equated to the claimed roller surface), are removed as suggested, the transfer roller 14 would not be "pivotally coupled to the at least one pair of opposing sidewalls" of the container body or "pivotally coupled to the container body" as required to teach or suggest all the recitations of claims 1 and 26, respectively, as required for *prima facie* obviousness.

Further, it is unclear how the sealing plugs 50 of Bedrossian could seal over the hooks 30, 32 of Dumesnil, Jr. The sealing plugs 50 are designed for a different type of container than the tray of Dumesnil, Jr. and further, are designed for a handle of a paint roller. Such disclosure clearly does not teach or suggest to one having ordinary skill in the art how to configure the combination of the tray of Dumesnil, Jr. with the lid of Bedrossian such that a seal is established over the hooks 30, 32.

Still further, Appellants assert that no reasonable expectation of success exists to combine the paint tray of Dumesnil, Jr. with the lid of Bedrossian as required to establish *prima facie* obviousness. "The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success." M.P.E.P. § 2143.02(I), 8th Edition, Rev. 6, September 2007, citing *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). As previously described, the interconnect hooks 30, 32 extend above the walls 18, 20 of the tray of Dumesnil, Jr. obstructing the lid of Bedrossian from sealing the open top of the tray. As a result, a person having ordinary skill in the art would not find a reasonable expectation of success to combine the lid of Bedrossian with the paint tray of Dumesnil Jr.

The Examiner has also provided no evidence as to why it "would have been obvious to modify the roller to be covered by a perforated material roller cover so that the first roller surface becomes the outer perforated surface." *Final Office Action*, February 13, 2008, page 5. That is, there is no clear articulation in the Office Action as to why one would modify the roller surface of Dumesnil, Jr. to be perforated (the reasons provided are not explained, e.g., why would such a modification "protect the roller" or "increase absorption?").

Appellants assert that, for at least the above reasons, the disclosure of Dumesnil, Jr. in view of Bedrossian and Keller does not render claims 1-7, 10, 12-16, 18, 26-27, 29, and 36-37 obvious. Review and reversal of this rejection of claims 1-7, 10, 12-16, 18, 26-27, 29, and 36-37 are, therefore, respectfully requested.

Further, the Final Office Action states the following: "The Dumesnil-Bedrossian-Keller combination discloses the invention except for the X shaped support structure where a first rib approaches a second rib proximate the center of the body. Carling teaches the X shaped support structure supporting a generally planar surface as shown in Fig. 3. It would have been obvious to use the X shaped pattern for the first roller surface to provide reinforcement." *Final Office Action*, February 13, 2008, page 6. As such, the Final Office Action appears to present Carling et al. merely to provide "a first support rib," "a second support rib," and "a X-shaped support structure." However, the deficiencies of the Dumesnil-Bedrossian-Keller combination are not addressed by the inclusion of Carling.

As a result, Appellants assert that, for at least the above reasons, the disclosure of Dumesnil, Jr. in view of Bedrossian, Keller, and Carling et al. does not render claims 21-22 obvious. Review and reversal of this rejection of claims 21-22 are, therefore, respectfully requested.

F. Claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are not unpatentable on the ground of non-statutory obviousness-type double patenting over the claim (i.e., the drawings) of U.S. Patent No. D524501 to Prokop et al. in view of Bedrossian (U.S. Patent No. 5,314,061).

G. Claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are not unpatentable on the ground of non-statutory obviousness-type double patenting over the claim (i.e., the drawings) of U.S. Patent No. D524003 to Prokop et al. in view of Bedrossian (U.S. Patent No. 5,314,061).

Appellants assert that claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are not unpatentable on the ground of non-statutory obviousness-type double patenting over the claim of U.S. Patent No. D524501 to Prokop et al. (hereinafter "Prokop et al. '501") in view of Bedrossian (U.S. Patent No. 5,314,061).

Appellants further assert that claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are not unpatentable on the ground of non-statutory obviousness-type double patenting over the claim of U.S. Patent No. D524003 to Prokop et al. (hereinafter "Prokop et al. '003") in view of Bedrossian (U.S. Patent No. 5,314,061).

Appellants have previously asserted in the Amendment and Response dated November 30, 2007 that the proper test in design-utility obvious-type double patenting situations is a two-way obviousness test (see *Carman Indus., Inc. v. Wahl et al.*, 724 F.2d 932, 940, 220 U.S.P.Q. 481, 487 (Fed. Cir. 1983), where the court noted that "double patenting will be found in a design/utility situation if the two patents cross-read." (emphasis added)). For obvious-type double patenting, "the test is whether the subject matter of the claims of the patent sought to be invalidated would have been obvious from the subject matter of the claims of the other patent, and vice versa." 724 F.2d at 940, 220 U.S.P.Q. at 487. Thus, the proper test for making design-utility double patenting rejections is two-way obviousness (see also, e.g., M.P.E.P. § 1504.06(II), 8th Edition, Rev. 6, September 2007, citing *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999)), "[i]n design-utility situations, a two-way obviousness determination is necessary for the rejection to be proper"). In making these determinations, the disclosure of the

reference document may not be used as prior art. *See* 724 F.2d at 940, 220 U.S.P.Q. at 487.

Further, in the case of a design-utility double patenting rejection, "[t]he examiner must be able to recreate the design claimed from the utility claims without any reliance whatsoever on the drawings." M.P.E.P. § 1504.06, 8th Edition, Rev. 6, September 2007.

The Examiner, in the Interview conducted September 12, 2007, stated that the Patent and Trademark Office need only show one-way obviousness in design-utility situations. Further, the Examiner asserted in the Interview Summary that the M.P.E.P. discussion of this subject matter is "case specific." *See Interview Summary*, sent September 21, 2007. In the Amendment and Response dated November 30, 2007, Appellants requested explicit legal support for the Patent and Trademark Office's position (i.e., that one-way obviousness applies in design-utility situations).

The Examiner responded in the Final Office Action of February 13, 2008 noting that M.P.E.P. § 804(II)(B)(3) states the following: "In general, the same double patenting principles and criteria that are applied in utility-utility situations are applied to utility-plant or utility-design situations." *See Final Office Action*, February 13, 2008, page 8. Appellants note, however, that such M.P.E.P. statement is prefaced by the phrase "*in general*" and as such, is not a definitive statement of the law. It appears that the Examiner had not reviewed the remainder of § 804(II)(B)(3) because the third paragraph summarizes *Carman Industries, Inc. v. Wahl et al.* (discussed above), which clearly supports two-way obviousness determinations in design-utility situations. As a result, Appellants maintain that two-way obviousness is required for design-utility double patenting situations and that the Examiner has improperly applied a one-way obviousness test to reject claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 on the ground of non-statutory obvious-type double patenting.

Further, two-way obviousness determinations are absolutely necessary in design-utility situations because utility patents and design patents afford different legal protection, i.e., "a 'utility patent' protects the way an article is used and works (35 U.S.C. 101), while a 'design patent' protects the way an article looks (35 U.S.C. 171)." M.P.E.P. § 1502.01, 8th Edition, Rev. 6, September 2007. Applying one-way obviousness determinations in design-utility situations

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could potentially force applicants into either: (1) only filing a utility application and forfeiting their design patent rights; (2) only filing a design application and forfeiting their utility patent rights; or (3) filing both a design application and utility application and forfeiting utility patent term due to terminally disclaiming the utility patent to the shorter term of the design patent.

Such forfeitures amount to an unjust loss of patent rights.

Appellants submit that the Examiner has failed to establish two-way obviousness between the current claims and Prokop et al. '501 in view of Bedrossian or Prokop et al. '003 in view of Bedrossian as required by applicable patent law.

Review and reversal of these non-statutory obviousness-type double patenting rejections of claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 are, therefore, respectfully requested.

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VIII. SUMMARY

For the foregoing reasons, Appellants respectfully request that the Board review and reverse the rejection of claims 1-7, 10, 12-16, 18, 21-22, 26-27, 29-30, 32-33, 36-38, and 40 as discussed herein, and that notification of the allowance of these claims be issued.

Respectfully submitted

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CERTIFICATE UNDER 37 CFR §1.10:

"Express Mail" mailing label number: EM 118968319 US Date of Deposit: August 11, 2008
The undersigned hereby certifies that this paper is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By:

Dani Moroz
Name: Dani Moroz



CLAIMS APPENDIX
Serial No. 10/758,626
Docket No. 287.00070101

1. A container, comprising:

a one-piece container body comprising a sloped floor and at least one pair of opposing sidewalls, the sloped floor and the at least one pair of opposing sidewalls defining a reservoir operable to hold a designated volume of liquid;

a lid to cover an open top of the container body and to form a relatively tight seal therewith; and

a perforated first roller surface pivotally coupled to the at least one pair of opposing sidewalls, the first roller surface being pivotable between a first position and a second position, wherein, when the first roller surface is in the first position, a substantial portion of the first roller surface is located within the reservoir above the designated volume of liquid and substantially between the at least one pair of opposing sidewalls.
2. The container of claim 1, wherein a lowermost portion of the first roller surface is located above the designated volume of liquid.
3. The container of claim 1, further wherein the first roller surface is, when the first roller surface is in the first position and the lid is covering the open top of the body, located within an enclosed space defined by the container body and the lid.
4. The container of claim 3, wherein the lid comprises an access opening.
5. The container of claim 4, wherein the access opening comprises a pour spout.

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6. The container of claim 1, wherein the container body comprises a pour spout.
7. The container of claim 1, wherein the first roller surface further comprises a frame.
10. The container of claim 1, wherein the sloped floor is inclined towards a first end of the container body such that a well is formed proximate the first end.
12. The container of claim 1, wherein the first roller surface is located, when in the first position, about 70 degrees to about 110 degrees from vertical.
13. The container of claim 1, wherein the container body comprises a stop member operable to support the first roller surface in the first position.
14. The container of claim 1, wherein the container body comprises a stop member operable to support the first roller surface in the second position.
15. The container of claim 1, wherein the sloped floor comprises a second roller surface.
16. The container of claim 1, wherein the container further comprises one or more handle members.

18. The container of claim 16, wherein the one or more handle members comprises one or more protrusions on the container body.

21. The container of claim 1, further comprising a first support rib and a second support rib both extending beneath the sloped floor, wherein the first support rib and the second support rib approach one another proximate the center of the container body.

22. The container of claim 21, wherein the first support rib and the second support rib form a generally X-shaped support structure.

26. An article, comprising:

a designated volume of liquid; and

a container comprising:

a container body for receiving and storing the designated volume of liquid,

wherein the container body comprises a plurality of sidewalls and a floor, the plurality of sidewalls defining an opening of the container body;

a removable and resealable lid operable to form a relatively tight seal with the container body and to selectively cover the opening; and

a perforated first roller surface pivotally coupled to the container body and positioned between two or more sidewalls of the plurality of sidewalls, wherein the first

roller surface is, when in a first position, located above the designated volume of liquid and below an uppermost edge of the container body.

27. The article of claim 26, wherein the first roller surface is movable, relative to the container body, between the first position and a second position.

29. The article of claim 26, wherein the floor of the container body comprises at least one sloped portion, wherein the sloped portion comprises a second roller surface.

30. A container, comprising:

a one-piece container body defining a partially enclosed reservoir having an open top, the reservoir for receiving and storing a designated volume of liquid; and

a first roller surface for distributing liquid over a roller-type liquid applicator, the first roller surface pivotally coupled to the container body, wherein the first roller surface is, when in a first position, located within the reservoir at a level above the designated volume of liquid and below the open top, and is further positioned about 70 degrees to about 110 degrees from vertical.

32. The container of claim 30, wherein the container body further comprises a sloped floor, the sloped floor defining a second roller surface.

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33. The container of claim 30, further comprising a selectively removable lid operable to seal the open top.

36. The container of claim 1, wherein the at least one pair of opposing sidewalls comprise tabs to pivotally receive the first roller surface.

37. The container of claim 1, wherein the first roller surface is operable to pivot about a pivot axis passing through the pair of opposing sidewalls.

38. A container, comprising:

a one-piece container body comprising a floor and at least one pair of opposing sidewalls, the floor and the at least one pair of opposing sidewalls defining a reservoir operable to hold a designated volume of liquid; and

a first roller surface for distributing liquid over a roller-type liquid applicator, the first roller surface pivotally coupled to the at least one pair of opposing sidewalls, wherein, when the first roller surface is in a first position in which the first roller surface faces upwardly and away from the floor, the first roller surface: is located within the reservoir above the designated volume of liquid; spans substantially between the at least one pair of opposing sidewalls; and defines an access zone for accessing liquid in the container by the roller-type liquid applicator.

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40. The container of claim 30, wherein the first roller surface is, when in the first position, about 80 degrees to about 100 degrees from vertical.



EVIDENCE APPENDIX

Serial No. 10/758,626
Docket No. 287.00070101

Amendment and Response to Non-final Office Action of July 31, 2007, filed with the U.S. Patent and Trademark Office on November 30, 2007.

Interview Summary sent September 21, 2007.

Final Office Action dated February 13, 2008.

Non-final Office Action dated July 31, 2007.

U.S. Patent No. 3,825,970; issued July 30, 1974 to Hanssen. First cited by the Examiner in the Office Action dated July 31, 2007.

U.S. Patent No. 4,107,815; issued August 22, 1978 to Dumesnil, Jr. First cited by the Examiner in the Office Action dated July 31, 2007.

U.S. Patent No. 5,314,061; issued May 24, 1994 to Bedrossian. First cited by the Examiner in the Office Action dated July 31, 2007.

U.S. Patent App. Pub. No. 2003/0074760 A1; published April 24, 2003 to Keller. First cited by the Examiner in the Office Action dated February 13, 2008.

U.S. Patent No. 5,992,106; issued November 30, 1999 to Carling et al. First cited by the Examiner in the Office Action dated February 20, 2007.

U.S. Patent No. D524,501; issued July 4, 2006 to Prokop et al. First cited by the Examiner in the Office Action dated July 31, 2007.

U.S. Patent No. D524,003; issued June 27, 2006 to Prokop et al. First cited by the Examiner in the Office Action dated July 31, 2007.



PATENT
Docket No. 287.0007 0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Robellard et al.)	Group Art Unit:	3781
)		
Serial No.: 10/758,626)	Examiner:	Stephen J. Castellano
Confirmation No.: 6109)		
)		
Filed: 15 January 2004)		
)		
For: <u>RESEALABLE CONTAINERS HAVING INTERNAL ROLLER SURFACE</u>			

COPY

AMENDMENT AND RESPONSE

Commissioner for Patents
Mail Stop Amendment
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action of July 31, 2007, please amend the above-identified application as follows:

Amendments to the claims are reflected in the listing of claims which begins on the page entitled "Amendments to the Claims."

Remarks begin on the page entitled "Remarks."

Amendments to the Claims

- Please amend claims 1, 26, 30, and 38.
- Please cancel claim 19-20 without prejudice.
- This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. (Currently Amended) A container, comprising:

a one-piece container body comprising a sloped floor and at least one pair of opposing sidewalls, the sloped floor and the at least one pair of opposing sidewalls defining a reservoir operable to hold a designated volume of liquid;

a lid to cover an open top of the container body and to form a relatively tight seal therewith; and

a perforated first roller surface pivotally coupled to the at least one pair of opposing sidewalls, the first roller surface being pivotable between a first position and a second position, wherein, when the first roller surface is in the first position, a substantial portion of the first roller surface is located within the reservoir above the designated volume of liquid and substantially between the at least one pair of opposing sidewalls.

2. (Original) The container of claim 1, wherein a lowermost portion of the first roller surface is located above the designated volume of liquid.

3. (Previously Presented) The container of claim 1, further wherein the first roller surface is, when the first roller surface is in the first position and the lid is covering the open top of the body, located within an enclosed space defined by the container body and the lid.

4. (Original) The container of claim 3, wherein the lid comprises an access opening.

5. (Original) The container of claim 4, wherein the access opening comprises a pour spout.

6. (Original) The container of claim 1, wherein the container body comprises a pour spout.
7. (Original) The container of claim 1, wherein the first roller surface further comprises a frame.
8. (Canceled)
9. (Canceled)
10. (Original) The container of claim 1, wherein the sloped floor is inclined towards a first end of the container body such that a well is formed proximate the first end.
11. (Canceled)
12. (Original) The container of claim 1, wherein the first roller surface is located, when in the first position, about 70 degrees to about 110 degrees from vertical.
13. (Original) The container of claim 1, wherein the container body comprises a stop member operable to support the first roller surface in the first position.
14. (Previously Presented) The container of claim 1, wherein the container body comprises a stop member operable to support the first roller surface in the second position.
15. (Original) The container of claim 1, wherein the sloped floor comprises a second roller surface.
16. (Original) The container of claim 1, wherein the container further comprises one or more handle members.

17. (Withdrawn) The container of claim 16, wherein the one or more handle members comprises one or more wire handles pivotally coupled to the container body.
18. (Original) The container of claim 16, wherein the one or more handle members comprises one or more protrusions on the container body.
- 19.-20. (Canceled)
21. (Original) The container of claim 1, further comprising a first support rib and a second support rib both extending beneath the sloped floor, wherein the first support rib and the second support rib approach one another proximate the center of the container body.
22. (Original) The container of claim 21, wherein the first support rib and the second support rib form a generally X-shaped support structure.
- 23.-25 (Canceled)
26. (Currently Amended) An article, comprising:
a designated volume of liquid; and
a container comprising:
a container body for receiving and storing the designated volume of liquid,
wherein the container body comprises a plurality of sidewalls and a floor, the plurality of sidewalls defining an opening of the container body;
a removable and resealable lid operable to form a relatively tight seal with the container body and to selectively cover the opening; and
a perforated first roller surface pivotally coupled to the container body and positioned between two or more sidewalls of the plurality of sidewalls, wherein the first roller surface is, when in a first position, located above the designated volume of liquid and below an uppermost edge of the container body.

27. (Original) The article of claim 26, wherein the first roller surface is movable, relative to the container body, between the first position and a second position.

28. (Canceled)

29. (Original) The article of claim 26, wherein the floor of the container body comprises at least one sloped portion, wherein the sloped portion comprises a second roller surface.

30. (Currently Amended) A container, comprising:

a one-piece container body defining a partially enclosed reservoir having an open top, the reservoir for receiving and storing a designated volume of liquid; and

a first roller surface for distributing liquid over a roller-type liquid applicator, the first roller surface pivotally coupled to the container body, wherein the first roller surface is, when in a first position, located within the reservoir at a level above the designated volume of liquid and below the open top, and is further positioned about 70 degrees to about 110 degrees from vertical.

31. (Canceled)

32. (Original) The container of claim 30, wherein the container body further comprises a sloped floor, the sloped floor defining a second roller surface.

33. (Original) The container of claim 30, further comprising a selectively removable lid operable to seal the open top.

34.-35. (Canceled)

36. (Previously Presented) The container of claim 1, wherein the at least one pair of opposing sidewalls comprise tabs to pivotally receive the first roller surface.

37. (Previously Presented) The container of claim 1, wherein the first roller surface is operable to pivot about a pivot axis passing through the pair of opposing sidewalls.

38. (Currently Amended) A container, comprising:

a one-piece container body comprising a floor and at least one pair of opposing sidewalls, the floor and the at least one pair of opposing sidewalls defining a reservoir operable to hold a designated volume of liquid; and

a first roller surface for distributing liquid over a roller-type liquid applicator, the first roller surface pivotally coupled to the at least one pair of opposing sidewalls, wherein, when the first roller surface is in a first position in which the first roller surface faces upwardly and away from the floor, the first roller surface is located within the reservoir above the designated volume of liquid; [[it]] spans substantially between the at least one pair of opposing sidewalls; and [[it]] defines an access zone for accessing liquid in the container by[[a]] the roller-type liquid applicator.

39. (Canceled)

40. (Previously Presented) The container of claim 30, wherein the first roller surface is, when in the first position, about 80 degrees to about 100 degrees from vertical.

Remarks

The Office Action of July 31, 2007 has been received and reviewed. With claims 1, 26, 30, and 38 having been amended, claims 19-20 having been canceled, and no claims having been added, the pending claims are claims 1-7, 10, 12-18, 21-22, 26, 27, 29, 30, 32, 33, 36-38, and 40. Reconsideration and withdrawal of the rejections are respectfully requested for at least the reasons set forth below.

Examiner Interview

Applicants' Representative, Matthew Adams (Reg. No. 43, 459), along with associate Matthew Goeden, appreciates the time of Examiner Castellano in discussing this matter during a telephone interview on September 12, 2007. Although various rejections including the double patenting rejections and the anticipation rejections of claims 30 and 38 were discussed at this time, no agreement was reached regarding the allowability of the rejected claims. However, it is believed that the claim amendments and remarks presented herein adhere to the substance of the interview and, as a result, entry and consideration are requested.

Claim Status

Applicants note that the Office Action substantively rejects claim 17, a claim that had previously been identified as withdrawn. If claim 17 has been rejoined, official notice of the same is requested in the next Official Communication.

Claim Amendments

Claims 1 and 26 have been amended to recite a perforated first roller surface. Support for this amendment may be found in the application as filed. *See, e.g.*, page 6, lines 6-7, FIGS. 16-17, original claim 20.

Claims 30 and 38 have been amended to recite a "first roller surface for distributing liquid over a roller-type liquid applicator." Support for these amendments may be found in the application as filed. *See, e.g.*, page 6, lines 8-9, and FIGS. 13, 16, & 18. Claim 38 has further been amended to improve readability.

The 35 U.S.C. § 102 Rejections

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. M.P.E.P. § 2131 (citation omitted).

- Claims 30, 32, 38, and 40 (Hanssen)

Claims 30, 32, 38, and 40 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hanssen (U.S. Patent No. 3,825,970). Applicants traverse this rejection.

Hanssen describes a paint roller retaining frame having an integral spray shield. *See Hanssen*, column 1, lines 6-8. Applicants submit that, among other deficiencies, no teaching is identified within the disclosure of Hanssen that describes a container including each and every recitation of independent claims 30 and 38 as required for anticipation.

For example, nothing is identified within the disclosure of Hanssen that teaches a first roller surface as recited in claims 30 and 38. The Office Action equates "a small longitudinal strip" of the inside surface of the elongated cylinder disclosed in Hanssen to the first roller surface as claimed. *See Office Action*, July 31, 2007, page 2. Applicants submit, however, that the inside surface of the elongated cylinder of Hanssen is clearly not a roller surface as the latter is recited in claims 30 and 38.

Nonetheless, independent claims 30 and 38 have been amended herein to recite explicitly that the first roller surface is for distributing liquid over a roller-type liquid applicator. This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing. The inside surface of the elongated cylinder of Hanssen is clearly not for distributing liquid over a roller-type liquid applicator. In fact, it is unclear how Hanssen's inner surface could ever be accessed for such a use. As such, Hanssen does not teach each and every recitation of independent claims 30 and 38 as required for anticipation.

For at least the above reasons, Applicants submit that claims 30 and 38 are not anticipated by Hanssen. Dependent claims 32 and 40, which depend from either independent claim 30 or 38, are also novel over Hanssen for the same reasons presented above. Moreover, these dependent claims recite additional elements that further support patentability.

Reconsideration and withdrawal of this rejection are, therefore, requested.

- Claims 30, 32, and 40 (Dumesnil, Jr.)

Claims 30, 32, and 40 were rejected under 35 U.S.C. § 102(b) as being anticipated by Dumesnil, Jr. (U.S. Patent No. 4,107,815). Applicants traverse this rejection.

Applicants note that dependent claim 40 was rejected under 35 U.S.C. § 102(b) as being anticipated by Dumesnil, Jr. while the parent of dependent claim 40, independent claim 38, was not.

Dumesnil, Jr. describes "a paint tray . . . , a paint transfer roller, and mount means for rotatably supporting said paint transfer roller on said paint tray." *Dumesnil, Jr.*, column 1, lines 34-37.

Applicants submit that, among other deficiencies, no teaching is identified within the disclosure of Dumesnil, Jr. that describes a container including each and every recitation of independent claims 30 and 38 as required for anticipation.

For example, nothing is identified within the disclosure of Dumesnil, Jr. that teaches a first roller surface for distributing liquid over a roller-type liquid applicator (as recited in claims 30 and 38). The Office Action equates "part of the outer surface of the transfer roller" disclosed in Dumesnil, Jr. to the roller surface as claimed. *See Office Action*, July 31, 2007, page 3. However, no part of the outer surface of the transfer roller of Dumesnil, Jr. is for distributing liquid over a roller-type liquid applicator. Instead, the transfer roller of Dumesnil, Jr. is for "applying paint to pad painters." *Dumesnil, Jr.*, column 1, lines 32-33. In fact, it is unclear even how the transfer roller of Dumesnil, Jr. could distribute paint onto a roller-type liquid applicator (e.g., it is unclear how the desired relative rotation between the transfer roller and a roller-type applicator would occur during use). As such, Dumesnil, Jr. does not teach each and every recitation of independent claims 30 and 38 as required for anticipation.

For at least the above reasons, Applicants submit that claims 30 and 38 are not anticipated by Dumesnil, Jr. Dependent claims 32 and 40, which depend from either independent claim 30 or 38, are also submitted to be novel over Dumesnil, Jr. for the same reasons presented above. Moreover, claims 32 and 40 recite additional elements that further support patentability.

Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

The 35 U.S.C. § 103 Rejections

- Claims 1-7, 10, 12-18, 26, 27, 29, 33, and 36-38 (Dumesnil, Jr. in view of Bedrossian)

Claims 1-7, 10, 12-18, 26, 27, 29, 33, and 36-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumesnil, Jr. in view of Bedrossian (U.S. Patent No. 5,314,061). Applicants traverse this rejection.

The Office Action states the following: "Dumesnil discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle." *Office Action*, July 31, 2007, page 3. As such, the Office Action appears to present Bedrossian merely to provide "a lid."

Applicants submit that Dumesnil, Jr. in view of Bedrossian does not teach, or even suggest, all the recitations of claims 1-7, 10, 12-18, 26, 27, 29, 33, and 36-38 as to establish obviousness.

For example, claim 1 recites "a lid to cover an open top of the container body and to form a relatively tight seal therewith," claim 26 recites "a removable and resealable lid operable to form a relatively tight seal with the container body and to selectively cover the opening," and claim 33 recites "a selectively removable lid operable to seal the open top." It is unclear how the lid of Bedrossian could form a relatively tight seal with the tray or seal the open top of Dumesnil, Jr., e.g., the interconnect hooks 30, 32 extend above the walls 18, 20 of the tray. If this rejection is maintained, Applicants request clarification on this matter.

Further for example, claims 1 and 26 now recite a perforated first roller surface. The perforated roller surface was originally recited in now-canceled claims 19-20 which, while not part of the present rejection, were rejected over Dumesnil, Jr. in view of Bedrossian and further in view of Drum (U.S. Patent No. 2,659,917), the latter which illustrates a perforate member 9. Accordingly, that rejection will be addressed now in the context of amended claims 1 and 26.

Among other deficiencies, Applicants submit that the Office Action has failed to provide any motivation to combine the teachings of Dumesnil, Jr. with those of Bedrossian and/or Drum. In fact the perforate member 9 of Drum clearly teaches away from combination with either the transfer roller of Dumesnil or the "rear side wall 15" of Drum.

For example, Dumesnil, Jr. indicates that the transfer roller, with the aid of the longitudinally extending ribs, forms channels that function as "paint receptacles" to carry paint. *See, e.g.*, Col. 3, Lines 23-30. Yet, if the transfer roller were perforated as is the member 9 of Drum, it is unclear how it would carry sufficient paint to the pad painter as the paint would merely flow through the perforations and into the transfer roller.

However, the Office Action asserts that "it would have been obvious to modify the Bedrossian surface to be perforated to allow excess paint to fall through the surface." *See, Office Action*, page 4. This assertion is strenuously traversed. The "Bedrossian surface" is clearly a "rear side wall 15" of the bucket, e.g., it forms an exterior surface of the paint container. If it were perforated as the Office Action suggests, paint passing through the surface would flow out of the container.

For at least the above reasons, Drum clearly teaches away from combination with both Dumesnil, Jr. and Bedrossian.

Moreover, with respect to claim 26, Dumesnil, Jr. in view of Bedrossian fails to teach or even suggest that the alleged first roller surface is, when in the first position, located above the designated volume of liquid.

Further for example, as recited above, Dumesnil, Jr. does not teach, or even suggest a first roller surface for distributing liquid over a roller-type liquid applicator as recited in claims 30 (from which claim 33 depends) and 38. Nothing is identified within the disclosure of Bedrossian that remedies the deficiencies of Dumesnil, Jr.

For at least the above reasons, Applicants submit that claims 1, 26, 30, and 38 are nonobvious over Dumesnil, Jr. in view of Bedrossian. Dependent claims 2-7, 10, 12-18, 27, 29, 33, and 36-37, which depend from either independent claim 1, 26, 30, or 38, are also submitted to be nonobvious over Dumesnil, Jr. in view of Bedrossian not only because of their dependence, but also due to the particular subject matter recited therein. For example, the Office Action has not identified the stop members recited in claims 13-14, nor the second roller surface of claim 15.

Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

- Claims 19-20 (Dumesnil, Jr. in view of Bedrossian/Drum)

Claims 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumesnil, Jr. in view of Bedrossian as applied to claim 1, and further in view of Drum (U.S. Patent No. 2,659,917). While these claims have been canceled herein rendering their respective rejections moot, subject matter of these claims is now included in independent claim 1. Accordingly, this rejection is addressed above in the context of the obviousness rejection of claim 1.

- Claims 21-22 (Dumesnil, Jr. in view of Bedrossian/Carling et al.)

Claims 21-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumesnil, Jr. in view of Bedrossian as applied to claim 1, and further in view of Carling et al. (U.S. Patent No. 5,992,106).

As stated above, it is submitted that Dumesnil, Jr. in view of Bedrossian fails to establish obviousness with respect to claim 1 (from which claims 21 and 22 depend), and the disclosure of Carling et al. does not remedy these deficiencies. Rather, Carling et al. is relied upon to teach an "X-shaped support structure." Further, it is unclear as to what motivation exists to combine the teachings of Carling et al. with those of Dumesnil, Jr. and Bedrossian.

For at least these reasons, Applicants submit that claims 21 and 22 are nonobvious over Dumesnil, Jr. in view of Bedrossian and further in view of Carling et al. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

Double Patenting Rejections

Claims 1-7, 10, 12-22, 26, 27, 29, 30, 32, 33, 36-38, and 40 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claim of Prokop et al. (U.S. Patent No. D524,501) (hereinafter Prokop et al. '501) in view of Bedrossian (U.S. Patent No. 5,314,061). Claims 1-7, 10, 12-22, 26, 27, 29, 30, 32, 33, 36-38, and 40 were also rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claim of Prokop et al. (U.S. Patent No. D524,003) (hereinafter Prokop et al. '003) in view of Bedrossian. Applicants traverse these rejections.

It is noted that Prokop et al. '501 and Prokop et al. '003 (along with a third design patent application to Prokop et al. that has now issued as D518,265) were cited as pending patent applications to the Patent Office in an Information Disclosure Statement filed July 30, 2004. It is further noted that claims 19-20 have been canceled herein, rendering their respective rejections moot.

In *Carman Industries, Inc. v. Wahl et al.*, 724 F.2d 932, 220 USPQ 481 (Fed. Cir. 1983), the court noted that "double patenting will be found in a design/utility situation if the two patents cross-read" or are obvious in light of the subject matter of the other. *Id.* at 487, emphasis added. Thus, the proper test for making design/utility double patenting rejections is two-way obviousness (see also, e.g., M.P.E.P. § 1504.06(II) (citing *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999)), "[I]n design-utility situations, a two-way obviousness determination is necessary for the rejection to be proper"). In making these determinations, the disclosure of the reference document may not be used as prior art. *Carman Industries* at 487. Further, in the case of a design-utility double patenting rejection, "[t]he examiner must be able to recreate the design claimed from the utility claims without any reliance whatsoever on the drawings." M.P.E.P. § 1504.06.

Applicants submit that the Office Action has failed to establish two-way obviousness between the current claims and Prokop et al. '501 in view of Bedrossian, or Prokop et al. '003 in view of Bedrossian. At the very least, Applicants submit that Prokop et al. '501/Prokop et al. '003 in view of Bedrossian are not obvious in view of the current claims. For example, Applicants submit that the claimed designs of Prokop et al. '501 and Prokop et al. '003, each in view of Bedrossian, could not be recreated merely from the utility claims of the instant application.

The Examiner, in the interview, stated that the Office need only show one-way obviousness in design/utility situations, asserting in the Interview Summary that the M.P.E.P. discussion of this subject matter is "case specific." However, absolutely no legal support for this assertion has been provided. Should this rejection be maintained, explicit legal support for the Office's position, including an explanation as to why it is contrary to the above-identified case law, is requested in the next Official Communication.

Amendment and Response

Page 14 of 14

Serial No.: 10/758,626

Confirmation No.: 6109

Filed: 15 January 2004

For: RESEALABLE CONTAINERS HAVING INTERNAL ROLLER SURFACE

Reconsideration and withdrawal of these double patenting rejections are, therefore, requested.

Summary

It is submitted that the pending claims are in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted

By

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30 Nov. 2007
Date

By: Matthew W. Adams

Matthew W. Adams

Reg. No. 43,459

Direct Dial (612) 305-1227

CERTIFICATE UNDER 37 CFR § 1.8:

The undersigned hereby certifies that this paper is being transmitted by facsimile in accordance with 37 CFR § 1.6(d) to the Patent and Trademark Office, addressed to **Mail Stop Amendment**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 30th day of November, 2007, at 9:30 am (Central Time).

By: Dani Moroz

Name: Dani Moroz



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,626	01/15/2004	James R. Robellard	287.00070101	6109

26813 7590 09/21/2007
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EXAMINER

CASTELLANO, STEPHEN J

ART UNIT	PAPER NUMBER
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3781

MAIL DATE	DELIVERY MODE
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09/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

COPY

Interview Summary	Application No.		Applicant(s)	
	10/758,626		ROBELLARD ET AL.	
	Examiner		Art Unit	
	/Stephen J. Castellano/		3781	

All participants (applicant, applicant's representative, PTO personnel):

(1) /Stephen J. Castellano/ (3) _____

(2) Mr. Matt Adams (appl. rep.) (4) _____

Date of Interview: 12 September 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____

Claim(s) discussed: Of record.

Identification of prior art discussed: Of record.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.


Stephen Castellano
Primary Examiner

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed double patenting rejections in design-utility situation, Office's position is that only one-way distinctness is required. The two-way distinctness situations discussed in the MPEP are case specific situations. Hanssen is being applied such that the inner surface of the cylinder of the roller is being read as the surface which faces upwardly, this surface is not exposed to the paint or liquid within the shield. Dumesnil, Jr. has a roller whose ends are connected to a container rear wall, the rear wall is attached to the sidewalls. The roller ends are indirectly attached to a pair of opposed sidewalls of the paint tray.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,626	01/15/2004	James R. Robellard	287.00070101✓	6109

26813 7590 02/13/2008
MUETING, RAASCH & GEBHARDT, P.A.
P.O. BOX 581415
MINNEAPOLIS, MN 55458

COPY

EXAMINER

CASTELLANO, STEPHEN J

ART UNIT	PAPER NUMBER
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3781

MAIL DATE	DELIVERY MODE
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02/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,626	Applicant(s) ROBELLARD ET AL.	
	Examiner /Stephen J. Castellano/	Art Unit 3781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10, 12-18, 21, 22, 26, 27, 29, 30, 32, 33, 36-38 and 40 is/are pending in the application.
- 4a) Of the above claim(s) 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 12-16, 18, 21, 22, 26, 27, 29, 30, 32, 33, 36-38 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11-30-07</u> | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3781

Claim 17 stands withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and specie, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 28, 2006.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30, 32, 38 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanssen.

Hanssen discloses a paint roller, frame and shield. When the shield is placed in a position to paint a ceiling, the shield defines an open top container body made of one-piece as the elongated handle can be removed. The container body has a sloped floor of arcuate shape and a pair of opposing sidewalls, the sloped floor and sidewalls define an elongated reservoir for holding liquid (paint). The roller includes an elongated cylinder having two circular end portions which attach the cylinder to the opposed sidewalls, the inside surface of the elongated cylinder has a first roller surface (a small longitudinal strip of the inside surface of cylinder) pivotally coupled to the container body in a first position (the position where the first surface lies closest to bolt 18), located within the reservoir at a level above the volume of liquid (which liquid is comparatively shallow in depth) and below the open top, and is further positioned about 70 degrees to about 110 degrees from vertical (the strip covers an arc of less than 40 degrees of the 360 degree inner circumference).

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Re claim 38, the first roller surface faces upward and the roller defines an access zone (another roller surface the extends outwardly and upwardly from the container body) that allows accessing liquid by a roller type applicator.

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, "This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing." Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 Office action, this rejection is maintained.

Re claim 40, the strip covers an arc of less than 20 degrees of the 360 degree inner circumference.

Claims 30, 32 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Dumesnil, Jr. (Dumesnil).

Dumesnil discloses a one-piece container body (paint tray) defining an open top reservoir for holding a designated volume of liquid and a first roller surface (part of the outer surface of the transfer roller positioned to face downwardly towards a surface of paint in the reservoir) pivotally coupled to the container body, the first roller surface is located within the reservoir at a level above the volume of liquid and below the open top and is further positioned about 70 to 110 degrees from the vertical (the portion of the outer surface is less than 40 degrees of the 360 degree inner circumference).

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, "This amendment is intended to make

Art Unit: 3781

explicit what was already implied, e.g., this amendment is not narrowing.” Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 Office action, this rejection is maintained.

If it should be deemed that the amendment does narrow the claim, this rejection is still maintained. Dumesnil’s first roller surface is fully capable of distributing liquid over a roller-type liquid applicator.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil in view of Bedrossian.

Dumesnil discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out.

Note: Although claims 30 and 38 have been amended, applicant states on page 8, lines 19-21 of the remarks submitted November 30, 2007, “This amendment is intended to make explicit what was already implied, e.g., this amendment is not narrowing.” Since the claims are no narrower than as previously submitted in the June 20, 2007 amendment, there is no reason to

Art Unit: 3781

remove this rejection. Insofar as the claim has not been changed from the June 20, 2007 Office action, this rejection is maintained.

If it should be deemed that the amendment does narrow the claim, this rejection is still maintained. Dumesnil's first roller surface is fully capable of distributing liquid over a roller-type liquid applicator.

Claims 1-7, 10, 12-16, 18, 26, 27, 29, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil in view of Bedrossian and Keller.

Dumesnil discloses the invention except for the lid and the roller perforations. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out. Keller teaches a roller cover of either open-cell foam or sponge material suitable materials capable of carrying paint (see paragraph [0029], lines 1-6). The foam and sponge materials are perforated. It would have been obvious to modify the roller to be covered by a perforated material roller cover so that the first roller surface becomes the outer perforated surface of the roller cover to (1) protect the roller, (2) increase absorption properties of the roller and (3) allow for easy replacement of the roller cover when the roller cover first surface becomes worn.

Re claims 16 and 18, Bedrossian further teaches a handle. It would have been obvious to add a handle for easy carrying by a convenient and comfortable grip. Official notice was taken that protrusions on the container body for reinforcing and attaching a bail handle are well known in the non-final Office action mailed July 31, 2007. The Official notice is now being treated as a prior art admission. It would have been obvious to add the protrusions to reinforce the body at

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the area of bail handle attachment to prevent a rip or prevent excessive wear from occurring at the handle attachment site.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil in view of Bedrossian and Keller as applied to claim 1 above, and further in view of Carling et al. (Carling).

The Dumesnil-Bedrossian-Keller combination discloses the invention except for the X shaped support structure where a first rib approaches a second rib proximate the center of the body. Carling teaches the X shaped support structure supporting a generally planar surface as shown in Fig. 3. It would have been obvious to use the X shaped pattern for the first roller surface to provide reinforcement.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 10, 12-16, 18, 21, 22, 26, 27, 29, 30, 32, 33, 36-38 and 40 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims

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(the drawings) of U.S. Patent No. D524501 to Prokop et al. (Prokop) in view of Bedrossian.

Prokop discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out.

Claims 1-7, 10, 12-16, 18, 21, 22, 26, 27, 29, 30, 32, 33, 36-38 and 40 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims (the drawings) of U.S. Patent No. D524003 to Prokop et al. (Prokop) in view of Bedrossian.

Prokop discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out.

Applicant's arguments filed November 30, 2007 have been fully considered but they are not persuasive.

Regarding the perforated roller surface, the rejections have been modified to address this limitation.

Re Hanssen, applicant states that the amendment doesn't narrow the claims rejected by Hanssen. The Hanssen rejection is maintained. Applicant doesn't argue the claim language submitted in the June 20, 2007 amendment.

Re Dumesnil, the roller and container are capable of distributing liquid over a roller-type liquid applicator.

Re Dumesnil in view of Bedrossian, the lid can be applied to the upper edge after hooks 30, 32 are removed to tightly seal the lid without interference. Also, the sealing plugs 50 of Bedrossian are effective in sealing the slots made for hooks 30, 32.

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Re the non-statutory obviousness double patenting rejections and applicant's request for explicit legal support, MPEP section 804 Part II. B. 3. Design/Plant – Utility Situations states in the first paragraph that “In general, the same double patenting principles and criteria that are applied in utility – utility situations are applied to utility – plant or utility – design situations.”

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Stephen J. Castellano/ whose telephone number is 571-272-4535. The examiner can normally be reached on increased flexibility plan (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony D. Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3781

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J. Castellano/
Primary Examiner
Art Unit 3781

sjc

Notice of References Cited	Application/Control No. 10/758,626	Applicant(s)/Patent Under Reexamination ROBELLARD ET AL.	
	Examiner /Stephen J. Castellano/	Art Unit 3781	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2003/0074760	04-2003	Keller, Russell D.	15/230.11
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

INFORMATION DISCLOSURE STATEMENT	Atty. Docket No.: 287.0007 0101	Serial No.: 10/758,626
	Applicant(s): Robellard et al.	Confirmation No.: 6109
	Application Filing Date: January 15, 2004	Group: 3781
	Information Disclosure Statement mailed: November 30, 2007	

U.S. PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
		D518,265	03/28/06	Prokop et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
		None						

OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

Examiner Initial	Copy Enclosed	Document Description
		None

U.S. PATENT APPLICATIONS BY SERIAL NUMBER

Examiner Initial	Document Number	Filing Date	Name	Class	Subclass
	None				

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /SC/

EXAMINER /Stephen Castellano/	Date Considered 01/30/2008
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,626	01/15/2004	James R. Robellard	287.00070101	6109

26813 7590 07/31/2007
MUETING, RAASCH & GEBHARDT, P.A.
P.O. BOX 581415
MINNEAPOLIS, MN 55458

COPY

EXAMINER

CASTELLANO, STEPHEN J

ART UNIT	PAPER NUMBER
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3781

MAIL DATE	DELIVERY MODE
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07/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/758,626

Applicant(s)

ROBELLARD ET AL.

Examiner

/Stephen J. Castellano/

Art Unit

3781

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10, 12-22, 26, 27, 29, 30, 32, 33, 36-38 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 12-22, 26, 27, 29, 30, 32, 33, 36-38 and 40 is/are rejected.
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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30, 32, 38 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanssen.

Hanssen discloses a paint roller, frame and shield. When the shield is placed in a position to paint a ceiling, the shield defines an open top container body made of one-piece as the elongated handle can be removed. The container body has a sloped floor of arcuate shape and a pair of opposing sidewalls, the sloped floor and sidewalls define an elongated reservoir for holding liquid (paint). The roller includes an elongated cylinder having two circular end portions which attach the cylinder to the opposed sidewalls, the inside surface of the elongated cylinder has a first roller surface (a small longitudinal strip of the inside surface of cylinder) pivotally coupled to the container body in a first position (the position where the first surface lies closest to bolt 18), located within the reservoir at a level above the volume of liquid (which liquid is comparatively shallow in depth) and below the open top, and is further positioned about 70 degrees to about 110 degrees from vertical (the strip covers an arc of less than 40 degrees of the 360 degree inner circumference).

Re claim 38, the first roller surface faces upward and the roller defines an access zone (another roller surface the extends outwardly and upwardly from the container body) that allows accessing liquid by a roller type applicator.

Art Unit: 3781

Re claim 40, the strip covers an arc of less than 20 degrees of the 360 degree inner circumference.

Claims 30, 32 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Dumesnil, Jr. (Dumesnil).

Dumesnil discloses a one-piece container body (paint tray) defining an open top reservoir for holding a designated volume of liquid and a first roller surface (part of the outer surface of the transfer roller positioned to face downwardly towards a surface of paint in the reservoir) pivotally coupled to the container body, the first roller surface is located within the reservoir at a level above the volume of liquid and below the open top and is further positioned about 70 to 110 degrees from the vertical (the portion of the outer surface is less than 40 degrees of the 360 degree inner circumference).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 10, 12-19, 26, 27, 29, 33 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil in view of Bedrossian.

Dumesnil discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out.

Re claims 16-18, Bedrossian further teaches a handle. It would have been obvious to add a handle for easy carrying by a convenient and comfortable grip. Official notice is taken that protrusions on the container body for reinforcing and attaching a bail handle are well known. It would have been obvious to add the protrusions to reinforce the body at the area of bail handle attachment to prevent a rip or prevent excessive wear from occurring at the handle attachment site.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil in view of Bedrossian as applied to claim 1 above, and further in view of Drum.

The Dumesnil-Bedrossian combination discloses the invention except for the perforated surface. Drum teaches a perforated surface. It would have been obvious to modify the Bedrossian surface to be perforated to allow excess paint to fall through the surface to allow quicker discharge of excess paint.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil in view of Bedrossian as applied to claim 1 above, and further in view of Carling et al. (Carling).

The Dumesnil-Bedrossian combination discloses the invention except for the X shaped support structure where a first rib approaches a second rib proximate the center of the body. Carling teaches the X shaped support structure supporting a generally planar surface as shown in Fig. 3. It would have been obvious to use the X shaped pattern for the first roller surface to provide reinforcement.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection

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is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 10, 12-22, 26, 27, 29, 30, 32, 33, 36-38 and 40 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims (the drawings) of U.S. Patent No. D524501 to Prokop et al. (Prokop) in view of Bedrossian. Prokop discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out.

Claims 1-7, 10, 12-22, 26, 27, 29, 30, 32, 33, 36-38 and 40 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims (the drawings) of U.S. Patent No. D524003 to Prokop et al. (Prokop) in view of Bedrossian. Prokop discloses the invention except for the lid. Bedrossian teaches a lid to cover a paint receptacle. It would have been obvious to cover the paint receptacle to keep contaminants from soiling paint in the tray or to preserve the freshness of the paint by keeping it from drying out.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Stephen J. Castellano/ whose telephone number is 571-272-4535. The examiner can normally be reached on increased flexibility plan (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony D. Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-5199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J. Castellano/
Primary Examiner
Art Unit 3781

sjc

Notice of References Cited	Application/Control No. 10/758,626		Applicant(s)/Patent Under Reexamination ROBELLARD ET AL.	
	Examiner /Stephen J. Castellano/		Art Unit 3781	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-D524,501	07-2006	Prokop et al.	D32/53.1
*	B	US-D524,003	06-2006	Prokop et al.	D32/53.1
*	C	US-3,825,970	07-1974	Hanssen, Robert I.	15/230.11
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



RELATED PROCEEDINGS APPENDIX

Serial No. 10/758,626

Docket No. 287.00070101

[NONE]



CITED AUTHORITIES AND DOCUMENTS APPENDIX

Serial No. 10/758,626
Docket No. 287.00070101

37 C.F.R. § 1.113.

37 C.F.R. § 1.191.

37 C.F.R. § 41.20(b)(2).

37 C.F.R. § 41.37.

Carman Indus., Inc. v. Wahl et al., 724 F.2d 932, 220 U.S.P.Q. 481 (Fed. Cir. 1983)

In re Dembiczak, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999)

Ex parte Levy, 17 U.S.P.Q.2d 1461 (Bd. Pat. App. & Inter. 1990)

In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986)

M.P.E.P. § 804(II)(B)(3), 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 1502.01, 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 1504.06, 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 1504.06(II), 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 2112(IV), 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 2131, 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 2141(III), 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 2141.02(I), 8th Edition, Rev. 6, September 2007.

M.P.E.P. § 2143.02(I), 8th Edition, Rev. 6, September 2007.

In re Robertson, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999).

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 2 U.S.P.Q.2d 1051 (Fed. Cir. 1987).

In re Wilson, 424 F.2d 1382, 165 U.S.P.Q. 494 (CCPA 1970).

prior Office action. The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references. If the reply is with respect to an application, a request may be made that objections or requirements as to form not necessary to further consideration of the claims be held in abeyance until allowable subject matter is indicated. The applicant's or patent owner's reply must appear throughout to be a *bona fide* attempt to advance the application or the reexamination proceeding to final action. A general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section.

(c) In amending in reply to a rejection of claims in an application or patent under reexamination, the applicant or patent owner must clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. The applicant or patent owner must also show how the amendments avoid such references or objections.

[46 FR 29182, May 29, 1981; para. (b) revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; paras. (a) and (c) revised, 65 FR 54604, Sept. 8, 2000, effective Nov. 7, 2000; para. (a)(2) revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; para. (a)(2) revised, 69 FR 56481, Sept. 21, 2004, effective Oct. 21, 2004; para. (a)(2)(i) revised, 70 FR 3880, Jan. 27, 2005, effective Dec. 8, 2004]

§ 1.112 Reconsideration before final action.

After reply by applicant or patent owner (§ 1.111 or § 1.945) to a non-final action and any comments by an inter partes reexamination requester (§ 1.947), the application or the patent under reexamination will be reconsidered and again examined. The applicant, or in the case of a reexamination proceeding the patent owner and any third party requester, will be notified if claims are rejected, objections or requirements made, or decisions favorable to patentability are made, in the same manner as after the first examination (§ 1.104). Applicant or patent owner may reply to such Office action in the same manner provided in § 1.111 or § 1.945, with or without amendment, unless such Office action indicates that it is made final (§ 1.113) or an appeal (§ 41.31 of this title) has been taken (§ 1.116),

or in an inter partes reexamination, that it is an action closing prosecution (§ 1.949) or a right of appeal notice (§ 1.953).

[46 FR 29182, May 29, 1981; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; revised, 65 FR 54604, Sept. 8, 2000, effective Nov. 7, 2000; revised, 65 FR 76756, Dec. 7, 2000, effective Feb. 5, 2001; revised, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.113 Final rejection or action.

(a) On the second or any subsequent examination or consideration by the examiner the rejection or other action may be made final, whereupon applicant's, or for ex parte reexaminations filed under § 1.510, patent owner's reply is limited to appeal in the case of rejection of any claim (§ 41.31 of this title), or to amendment as specified in § 1.114 or § 1.116. Petition may be taken to the Director in the case of objections or requirements not involved in the rejection of any claim (§ 1.181). Reply to a final rejection or action must comply with § 1.114 or paragraph (c) of this section. For final actions in an inter partes reexamination filed under § 1.913, see § 1.953.

(b) In making such final rejection, the examiner shall repeat or state all grounds of rejection then considered applicable to the claims in the application, clearly stating the reasons in support thereof.

(c) Reply to a final rejection or action must include cancellation of, or appeal from the rejection of, each rejected claim. If any claim stands allowed, the reply to a final rejection or action must comply with any requirements or objections as to form.

[24 FR 10332, Dec. 22, 1959; 46 FR 29182, May 29, 1981; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; revised, 65 FR 14865, Mar. 20, 2000, effective May 29, 2000 (adopted as final, 65 FR 50092, Aug. 16, 2000); para. (a) revised, 65 FR 76756, Dec. 7, 2000, effective Feb. 5, 2001; para. (a) revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; para. (a) revised, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.114 Request for continued examination.

(a) If prosecution in an application is closed, an applicant may request continued examination of the application by filing a submission and the fee set forth in § 1.17(e) prior to the earliest of:

(1) Payment of the issue fee, unless a petition under § 1.313 is granted;

memoranda, if any, in support thereof should accompany or be embodied in the petition; and where facts are to be proven, the proof in the form of affidavits or declarations (and exhibits, if any) must accompany the petition.

(c) When a petition is taken from an action or requirement of an examiner in the *ex parte* prosecution of an application, or in the *ex parte* or *inter partes* prosecution of a reexamination proceeding, it may be required that there have been a proper request for reconsideration (§ 1.111) and a repeated action by the examiner. The examiner may be directed by the Director to furnish a written statement, within a specified time, setting forth the reasons for his or her decision upon the matters averred in the petition, supplying a copy to the petitioner.

(d) Where a fee is required for a petition to the Director the appropriate section of this part will so indicate. If any required fee does not accompany the petition, the petition will be dismissed.

(e) Oral hearing will not be granted except when considered necessary by the Director.

(f) The mere filing of a petition will not stay any period for reply that may be running against the application, nor act as a stay of other proceedings. Any petition under this part not filed within two months of the mailing date of the action or notice from which relief is requested may be dismissed as untimely, except as otherwise provided. This two-month period is not extendable.

(g) The Director may delegate to appropriate Patent and Trademark Office officials the determination of petitions.

[24 FR 10332, Dec. 22, 1959; 34 FR 18857, Nov. 26, 1969; paras. (d) and (g), 47 FR 41278, Sept. 17, 1982, effective Oct. 1, 1982; para. (a), 49 FR 48416, Dec. 12, 1984, effective Feb. 11, 1985; para. (f) revised, 65 FR 54604, Sept. 8, 2000, effective Nov. 7, 2000; paras. (a) and (c) revised, 65 FR 76756, Dec. 7, 2000, effective Feb. 5, 2001; paras. (a), (a)(2)-(3), (c)-(e) & (g) revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; para. (a)(3) revised, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.182 Questions not specifically provided for.

All situations not specifically provided for in the regulations of this part will be decided in accordance with the merits of each situation by or under the

authority of the Director, subject to such other requirements as may be imposed, and such decision will be communicated to the interested parties in writing. Any petition seeking a decision under this section must be accompanied by the petition fee set forth in § 1.17(f).

[47 FR 41278, Sept. 17, 1982, effective date Oct. 1, 1982; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; revised, 69 FR 56481, Sept. 21, 2004, effective Nov. 22, 2004]

§ 1.183 Suspension of rules.

In an extraordinary situation, when justice requires, any requirement of the regulations in this part which is not a requirement of the statutes may be suspended or waived by the Director or the Director's designee, *sua sponte*, or on petition of the interested party, subject to such other requirements as may be imposed. Any petition under this section must be accompanied by the petition fee set forth in § 1.17(f).

[47 FR 41278, Sept. 17, 1982, effective Oct. 1, 1982; revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; revised, 69 FR 56481, Sept. 21, 2004, effective Nov. 22, 2004]

§ 1.184 [Reserved]

[Removed and reserved, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997]

APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

§ 1.191 Appeal to Board of Patent Appeals and Interferences.

Appeals to the Board of Patent Appeals and Interferences under 35 U.S.C. 134(a) and (b) are conducted according to part 41 of this title.

[46 FR 29183, May 29, 1981; para. (a), 47 FR 41278, Sept. 17, 1982, effective Oct. 1, 1982; para. (d), 49 FR 555, Jan. 4, 1984, effective Apr. 1, 1984; 49 FR 48416, Dec. 12, 1984, effective Feb. 11, 1985; paras. (b) and (d) amended, para. (e) added, 54 FR 29553, July 13, 1989, effective Aug. 20, 1989; para. (d) revised, 58 FR 54504, Oct. 22, 1993, effective Jan. 3, 1994; paras. (a) and (b) revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; para. (a) revised, 65 FR 76756, Dec. 7, 2000, effective Feb. 5, 2001;

para. (e) revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; para. (a) revised, 68 FR 70996, Dec. 22, 2003, effective Jan. 21, 2004; revised, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.192 [Reserved]

[36 FR 5850, Mar. 30, 1971; para. (a), 47 FR 41278, Sept. 17, 1982, effective Oct. 1, 1982; para. (a), 49 FR 556, Jan. 4, 1984, effective Apr. 1, 1984; 53 FR 23734, June 23, 1988, effective Sept. 12, 1988; para. (a), (c), and (d) revised, 58 FR 54504, Oct. 22, 1993, effective Jan. 3, 1994; paras. (a)-(c) revised, 60 FR 14488, Mar. 17, 1995, effective Apr. 21, 1995; para. (a) revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; removed and reserved, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.193 [Reserved]

[24 FR 10332, Dec. 22, 1959; 34 FR 18858, Nov. 26, 1969; para. (c), 47 FR 21752, May 19, 1982, added effective July 1, 1982; para. (b), 50 FR 9382, Mar. 7, 1985, effective May 8, 1985; 53 FR 23735, June 23, 1988, effective Sept. 12, 1988; para. (c) deleted, 57 FR 2021, Jan. 17, 1992, effective Mar. 16, 1992; para. (b) revised, 58 FR 54504, Oct. 22, 1993, effective Jan. 3, 1994; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; para. (b)(1) revised, 65 FR 54604, Sept. 8, 2000, effective Nov. 7, 2000; para. (a)(1) revised, 68 FR 14332, Mar. 25, 2003, effective May 1, 2003; removed and reserved, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.194 [Reserved]

[42 FR 5595, Jan. 28, 1977; paras. (b) & (c), 47 FR 41278, Sept. 17, 1982, effective Oct. 1, 1982; para. (a), 49 FR 48416, Dec. 12, 1984, effective Feb. 11, 1985; para. (b) revised 53 FR 23735, June 23, 1988, effective Sept. 12, 1988; para. (b) revised, 58 FR 54504, Oct. 22, 1993, effective Jan. 3, 1994; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; removed and reserved, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.195 [Reserved]

[34 FR 18858, Nov. 26, 1969; removed and reserved, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.196 [Reserved]

[24 FR 10332, Dec. 12, 1959; 49 FR 29183, May 29, 1981; 49 FR 48416, Dec. 12, 1984, effective Feb. 12, 1985;

para. (b) revised, 53 FR 23735, June 23, 1988, effective Sept. 12, 1988; paras. (a), (b) & (d) amended, paras. (e) & (f) added, 54 FR 29552, July 13, 1989, effective Aug. 20, 1989; para. (f) revised, 58 FR 54504, Oct. 22, 1993, effective Jan. 3, 1994; paras. (b) & (d) revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; removed and reserved, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 1.197 Return of jurisdiction from the Board of Patent Appeals and Interferences; termination of proceedings.

(a) *Return of jurisdiction from the Board of Patent Appeals and Interferences.* Jurisdiction over an application or patent under *ex parte* reexamination proceeding passes to the examiner after a decision by the Board of Patent Appeals and Interferences upon transmittal of the file to the examiner, subject to appellant's right of appeal or other review, for such further action by appellant or by the examiner, as the condition of the application or patent under *ex parte* reexamination proceeding may require, to carry into effect the decision of the Board of Patent Appeals and Interferences.

(b) *Termination of proceedings.*

(1) Proceedings on an application are considered terminated by the dismissal of an appeal or the failure to timely file an appeal to the court or a civil action (§ 1.304) except:

(i) Where claims stand allowed in an application; or

(ii) Where the nature of the decision requires further action by the examiner.

(2) The date of termination of proceedings on an application is the date on which the appeal is dismissed or the date on which the time for appeal to the U.S. Court of Appeals for the Federal Circuit or review by civil action (§ 1.304) expires in the absence of further appeal or review. If an appeal to the U.S. Court of Appeals for the Federal Circuit or a civil action has been filed, proceedings on an application are considered terminated when the appeal or civil action is terminated. A civil action is terminated when the time to appeal the judgment expires. An appeal to the U.S. Court of Appeals for the Federal Circuit, whether from a decision of the Board or a judgment in a civil action, is terminated when the mandate is issued by the Court.

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 41.10 Correspondence addresses.

Except as the Board may otherwise direct,

(a) *Appeals.* Correspondence in an application or a patent involved in an appeal (subparts B and C of this part) during the period beginning when an appeal docketing notice is issued and ending when a decision has been rendered by the Board, as well as any request for rehearing of a decision by the Board, shall be mailed to: Board of Patent Appeals and Interferences, United States Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. Notices of appeal, appeal briefs, reply briefs, requests for oral hearing, as well as all other correspondence in an application or a patent involved in an appeal to the Board for which an address is not otherwise specified, should be addressed as set out in § 1.1 (a)(1)(i) of this title.

(b) *Contested cases.* Mailed correspondence in contested cases (subpart D of this part) shall be sent to Mail Stop INTERFERENCE, Board of Patent Appeals and Interferences, United States Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450.

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 41.11 *Ex parte* communications in *inter partes* proceedings.

An *ex parte* communication about an *inter partes* reexamination (subpart C of this part) or about a contested case (subparts D and E of this part) with a Board member, or with a Board employee assigned to the proceeding, is not permitted.

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 41.12 Citation of authority.

(a) Citations to authority must include:

(1) *For any United States Supreme Court decision*, a United States Reports citation.

(2) *For any decision other than a United States Supreme Court decision*, parallel citation to both the West Reporter System and to the United States Patents Quarterly whenever the case is pub-

lished in both. Other parallel citations are discouraged.

(3) *Pinpoint citations* whenever a specific holding or portion of an authority is invoked.

(b) Non-binding authority should be used sparingly. If the authority is not an authority of the Office and is not reproduced in one of the reporters listed in paragraph (a) of this section, a copy of the authority should be filed with the first paper in which it is cited.

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 41.20 Fees.

(a) *Petition fee.* The fee for filing a petition under this part is: \$400.00

(b) *Appeal fees.* (1) For filing a notice of appeal from the examiner to the Board:

By a small entity (§ 1.27(a) of this title) \$255.00

By other than a small entity \$510.00

(2) In addition to the fee for filing a notice of appeal, for filing a brief in support of an appeal:

By a small entity (§ 1.27(a) of this title) \$255.00

By other than a small entity \$510.00

(3) For filing a request for an oral hearing before the Board in an appeal under 35 U.S.C. 134:

By a small entity (§ 1.27(a) of this title) \$515.00

By other than a small entity . . . \$1,030.00

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004; paras. (b)(1) through (b)(3) revised, 69 FR 52604, Aug. 27, 2004, effective Oct. 1, 2004; para. (b)(3) corrected, 69 FR 55505, Sept. 15, 2004, effective Oct. 1, 2004; para. (a) revised, 69 FR 56481, Sept. 21, 2004, effective Nov. 22, 2004; para. (b) revised, 70 FR 3880, Jan. 27, 2005, effective Dec. 8, 2004; paras. (b)(1) through (b)(3) revised, 72 FR 46899, Aug. 22, 2007, effective Sept. 30, 2007]

Subpart B — *Ex Parte* Appeals

§ 41.30 Definitions.

In addition to the definitions in § 41.2, the following definitions apply to proceedings under this subpart unless otherwise clear from the context:

subpart, the Board may relinquish jurisdiction to the examiner or take other appropriate action to permit completion of the file.

(c) Prior to the entry of a decision on the appeal by the Board, the Director may sua sponte order the proceeding remanded to the examiner.

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 41.37 Appeal brief.

(a)(1) Appellant must file a brief under this section within two months from the date of filing the notice of appeal under § 41.31.

(2) The brief must be accompanied by the fee set forth in § 41.20(b)(2)

(b) On failure to file the brief, accompanied by the requisite fee, within the period specified in paragraph (a) of this section, the appeal will stand dismissed.

(c)(1) The brief shall contain the following items under appropriate headings and in the order indicated in paragraphs (c)(1)(i) through (c)(1)(x) of this section, except that a brief filed by an appellant who is not represented by a registered practitioner need only substantially comply with paragraphs (c)(1)(i) through (c)(1)(iv) and (c)(1)(vii) through (c)(1)(x) of this section:

(i) *Real party in interest.* A statement identifying by name the real party in interest.

(ii) *Related appeals and interferences.* A statement identifying by application, patent, appeal or interference number all other prior and pending appeals, interferences or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal. Copies of any decisions rendered by a court or the Board in any proceeding identified under this paragraph must be included in an appendix as required by paragraph (c)(1)(x) of this section.

(iii) *Status of claims.* A statement of the status of all the claims in the proceeding (e.g., rejected, allowed or confirmed, withdrawn, objected to, canceled) and an identification of those claims that are being appealed.

(iv) *Status of amendments.* A statement of the status of any amendment filed subsequent to final rejection.

(v) *Summary of claimed subject matter.* A concise explanation of the subject matter defined in each of the independent claims involved in the appeal, which shall refer to the specification by page and line number, and to the drawing, if any, by reference characters. For each independent claim involved in the appeal and for each dependent claim argued separately under the provisions of paragraph (c)(1)(vii) of this section, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters.

(vi) *Grounds of rejection to be reviewed on appeal.* A concise statement of each ground of rejection presented for review.

(vii) *Argument.* The contentions of appellant with respect to each ground of rejection presented for review in paragraph (c)(1)(vi) of this section, and the basis therefor, with citations of the statutes, regulations, authorities, and parts of the record relied on. Any arguments or authorities not included in the brief or a reply brief filed pursuant to § 41.41 will be refused consideration by the Board, unless good cause is shown. Each ground of rejection must be treated under a separate heading. For each ground of rejection applying to two or more claims, the claims may be argued separately or as a group. When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone. Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately. Any claim argued separately should be placed under a subheading identifying the claim by number. Claims argued as a group should be placed under a subheading identifying the claims by number. A statement which merely points

out what a claim recites will not be considered an argument for separate patentability of the claim.

(viii) *Claims appendix.* An appendix containing a copy of the claims involved in the appeal.

(ix) *Evidence appendix.* An appendix containing copies of any evidence submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the examiner and relied upon by appellant in the appeal, along with a statement setting forth where in the record that evidence was entered in the record by the examiner. Reference to unentered evidence is not permitted in the brief. See § 41.33 for treatment of evidence submitted after appeal. This appendix may also include copies of the evidence relied upon by the examiner as to grounds of rejection to be reviewed on appeal.

(x) *Related proceedings appendix.* An appendix containing copies of decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of this section.

(2) A brief shall not include any new or non-admitted amendment, or any new or non-admitted affidavit or other evidence. See § 1.116 of this title for amendments, affidavits or other evidence filed after final action but before or on the same date of filing an appeal and § 41.33 for amendments, affidavits or other evidence filed after the date of filing the appeal.

(d) If a brief is filed which does not comply with all the requirements of paragraph (c) of this section, appellant will be notified of the reasons for non-compliance and given a time period within which to file an amended brief. If appellant does not file an amended brief within the set time period, or files an amended brief which does not overcome all the reasons for non-compliance stated in the notification, the appeal will stand dismissed.

(e) The time periods set forth in this section are extendable under the provisions of § 1.136 of this title for patent applications and § 1.550(c) of this title for *ex parte* reexamination proceedings.

[Added, 69 FR 49959, Aug. 12, 2004, effective Sept. 13, 2004]

§ 41.39 Examiner's answer.

(a)(1) The primary examiner may, within such time as may be directed by the Director, furnish a written answer to the appeal brief including such explanation of the invention claimed and of the refer-

ences relied upon and grounds of rejection as may be necessary, supplying a copy to appellant. If the primary examiner determines that the appeal does not comply with the provisions of §§ 41.31 and 41.37 or does not relate to an appealable action, the primary examiner shall make such determination of record.

(2) An examiner's answer may include a new ground of rejection.

(b) If an examiner's answer contains a rejection designated as a new ground of rejection, appellant must within two months from the date of the examiner's answer exercise one of the following two options to avoid sua sponte dismissal of the appeal as to the claims subject to the new ground of rejection:

(1) *Reopen prosecution.* Request that prosecution be reopened before the primary examiner by filing a reply under § 1.111 of this title with or without amendment or submission of affidavits (§§ 1.130, 1.131 or 1.132 of this title) or other evidence. Any amendment or submission of affidavits or other evidence must be relevant to the new ground of rejection. A request that complies with this paragraph will be entered and the application or the patent under *ex parte* reexamination will be reconsidered by the examiner under the provisions of § 1.112 of this title. Any request that prosecution be reopened under this paragraph will be treated as a request to withdraw the appeal.

(2) *Maintain appeal.* Request that the appeal be maintained by filing a reply brief as set forth in § 41.41. Such a reply brief must address each new ground of rejection as set forth in § 41.37(c)(1)(vii) and should follow the other requirements of a brief as set forth in § 41.37(c). A reply brief may not be accompanied by any amendment, affidavit (§§ 1.130, 1.131 or 1.132 of this title) or other evidence. If a reply brief filed pursuant to this section is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under paragraph (b)(1) of this section.

(c) Extensions of time under § 1.136 (a) of this title for patent applications are not applicable to the time period set forth in this section. See § 1.136 (b) of this title for extensions of time to reply for patent applications and § 1.550 (c) of this title for extensions of time to reply for *ex parte* reexamination proceedings.

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724 F.2d 932
220 U.S.P.Q. 481
CARMAN INDUSTRIES, INC., Appellant,
v.
Eugene A. WAHL and Vibra Screw, Inc., Appellees.
Appeal No. 83-683.
United States Court of Appeals,
Federal Circuit.
Dec. 27, 1983.

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Thomas F. McWilliams, Chicago, Ill., argued, for appellant.

John W. Logan, Jr. and Thomas Ferrill, Jr., Fort Washington, Pa., argued, for appellees.

Before BENNETT, SMITH and NIES, Circuit Judges.

EDWARD S. SMITH, Circuit Judge.

This appeal is from the December 22, 1982, judgment of the United States District Court for the District of New Jersey holding U.S. patent No. 3,261,508 ('508) valid and infringed. Carman Industries, Inc. (Carman), appeals from that judgment. Carman commenced this action against Eugene A. Wahl and Vibra Screw, Inc. (Vibra), seeking a declaratory judgment that the '508 patent is invalid and not infringed. Vibra filed a counterclaim for patent infringement. The case was tried before the district court without a jury. After reviewing the record and briefs and, having heard oral argument, we find no clear error in the district court's findings of fact. The judgment

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is supported by the findings of fact. Thus, we affirm.

I.

On January 24, 1964, Eugene A. Wahl filed an application for patent for a "Vibratory Bin Activator" apparatus. U.S. patent No. 3,261,508 issued on that application on July 19, 1966.

A.

The invention relates to an apparatus that is attached to the base of a storage bin or hopper to promote the flow from the bin or hopper of solids that have poor flow characteristics. 1 Prior art approaches to the problem of promoting the flow of difficult-to-handle solids involve the use of sweep arms, screw conveyors, or like elements. Claims 2, 3, 4, 6, and 7 are involved in this appeal and are set forth below:

2. Apparatus for promoting the flow of material from a storage hopper having a discharge opening formed in the bottom thereof, said apparatus comprising,

- (a) a material-receiving member having a bottom wall defined by a plurality of concave surfaces terminating in a central outlet opening,
- (b) a baffle member rigidly secured to the material-receiving member and having a peripheral surface spaced from the inner wall of the material-receiving member,
- (c) means vibrationally suspending the material-receiving member from the hopper and in spaced position to the hopper wall, and
- (d) means for vibrating the material-receiving member.

3. The invention as recited in claim 2, wherein the baffle member is of convex form and wherein the said means for vibrating the material-receiving member is a gyrator mechanically-coupled to the material-receiving member, said gyrator comprising an eccentrically-mounted weight rotatable by an electric motor.

4. The invention as recited in claim 3, wherein the eccentrically-mounted weight is rotatable in a plane substantially normal to the axis of the said material-receiving member.

* * *

* * *

6. Apparatus for promoting the flow of material from a storage hopper having a conical lower portion terminating in a hopper discharge opening, said apparatus comprising,

- (a) a first concave member having a central opening formed therein and a cylindrical base portion,
- (b) a second concave member secured to the first concave member and having a central opening formed therein,
- (c) a baffle member secured to the first concave member and having a peripheral surface spaced from the inner wall of the said concave member,
- (d) means vibrationally suspending the first concave member from the hopper, with the said cylindrical base portion spaced from the hopper wall, and
- (e) means for vibrating the said three members as a unit.

7. The invention as recited in claim 6, wherein the said baffle member is an inverted dish-shaped member having a diameter substantially equal to the central opening in said first concave member.

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

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NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

The key point of contention with respect to the '508 patent is the compound concave surface limitations of claims 2 and 6, the only independent claims. The invention operates through a combination of three forces: the effects of the baffle member; the horizontal force supplied to the material particles through vibration of the material-receiving member; and gravity. The baffle forces the flow to proceed in an annular path down the concave surfaces of the material-receiving member. Through its vibration, the material-receiving member imparts horizontal motion to the flow, forcing the material into the void created below the baffle. In this manner the particles of material move down and in toward the center of the apparatus. The break in slope between the concave surfaces of the material-receiving member serves to "gather" the flow and accelerate the material through the central opening without competition between particles in the flow for position. Once the material passes this "break-slope," it proceeds rapidly to the lower concave surface. The break in slope between the concave surfaces serves to prevent the material from merely "crawling" down the side of the material-receiving member. Instead, the particles are presented with a sharp change in the forces being exerted on them, as indicated by the arrows in the following drawing:

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NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

B.

Judge Meanor, in a careful and comprehensive opinion, found that Carman failed to overcome the presumption of validity and he therefore held the patent valid. He found that the patent is not literally infringed but that the accused infringing device is the legal equivalent of the invention. He also found that, under the proposed construction of the claims under the doctrine of equivalents, the claims would be valid and, accordingly, held that the '508 patent is infringed by Carman's bin discharger. 2 Relying on the Third Circuit's analysis of double patenting in *Wahl v. Rexnord, Inc.* 3 the district court additionally found that the '508 patent was not invalid for double patenting. Carman appeals.

II.

Two principal issues are presented in this appeal:

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(1) whether the '508 patent is invalid under 35 U.S.C. Sec. 102 or Sec. 103 or is invalid for double patenting in view of U.S.Des. patent No. 202,068 ('068); and

(2) whether the '508 patent is infringed under the doctrine of equivalents.

In determining these issues we must accept the findings of fact of the district court unless we find them to be clearly erroneous. 4

Carman argues that the "concave surfaces" limitation of claim 2 and the "concave member" limitations of claim 6 compel the conclusion that the '508 patent is not infringed by Carman's conical material-receiving member. If those limitations are interpreted to include a conical member, Carman contends that the claims would be obvious or anticipated and, therefore, the claims must be held invalid. 5

With respect to double patenting, Carman urges the correctness of the trial court's earlier finding of invalidity in *Wahl v. Rexnord, Inc.* 6

Vibra argues that it was error to conclude that the '508 patent was not literally infringed. Vibra contends that, in any event, the finding of infringement under the doctrine of equivalents should be affirmed. The '508 patent is valid in Vibra's view.

III.

With respect to the issue of validity, three grounds of invalidity are argued: (1) that the invention is anticipated under section 102; (2) that the invention would have been obvious under section 103; and (3) that the '508 patent is invalid for double patenting in view of the earlier issued design patent to Wahl allegedly covering the same subject matter.

A.

With respect to anticipation, Dumbaugh, U.S. patent No. 3,178,068 (Dumbaugh), is the closest prior art to the '508 patent. 7 Dumbaugh was before the examiner during prosecution of the '508 patent. That reference discloses a conical material-receiving member having a continuous slope. Reference is made in Dumbaugh to Lee, U.S. patent No. 3,071,297 for the teaching of material-receiving member walls made up of a combination of curves having a varying, yet continuous, slope. Thus, the slope disclosed in Dumbaugh, while either uniform or variable, is nonetheless continuous. Dumbaugh also employs a baffle plate in the lower portion of the material-receiving member to regulate the flow rate and to maintain flow. Additionally, the reference includes an agitation apparatus for inducing spiral flow to the material.

The district court found several differences between Dumbaugh and the '508 patent claims. While Dumbaugh employs a baffle plate as does the '508 patent, it does not disclose a break in slope between two or more compound curved sections. Judge Meanor found that element to be a critical feature of the claimed invention. Lacking

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an element of the claims, the reference cannot anticipate them under section 102.

We conclude that the trial court's findings with respect to anticipation are not clearly erroneous. Dumbaugh does not disclose all of the elements of the invention and, therefore, the invention is not anticipated under 35 U.S.C. Sec. 102.

B.

Several prior art references are cited by Carman as establishing that the invention would have been obvious within the meaning of 35 U.S.C. Sec. 103. Dumbaugh and Lee, *supra*, are the most pertinent prior art references. Three additional prior art references were discussed by the court and are again propounded by Carman on appeal: Rouse, U.S. patent No. 3,012,697; British patent No. 508,528; and Wahl, U.S. patent No. 3,173,583. 8 None of these three references was before the examiner. Nonetheless, the district court found that Carman had not overcome the presumption of validity.

In a careful analysis, the court below assessed the scope and content of the prior art, the differences between the prior art and the invention, and the level of ordinary skill in the art as required under Graham

v. John Deere Co. 9 The district court determined that while each of the references discloses some feature of the invention, there remain substantial differences between the prior art and the claimed invention. It found that none of the references teaches the break in slope between two or more curved surfaces. It determined that the differences were substantial. Additionally, Carman's evidence on the level of ordinary skill in the art was found to be inadequate.

Our review of the record reveals that the district court's findings are well documented. We find no clear error. None of the references teaches the compound slope feature of the invention. The findings of the trial judge clearly indicate that he did not feel that the conical-concave distinction was critical to the issue of obviousness and he therefore fully considered each of the references. He carefully evaluated all of the evidence relevant to the issue of obviousness and correctly ascertained the differences between the invention and the prior art. We agree fully with his conclusion that "the [prior art] does not inform persons skilled in the art that a compound slope arrangement as recited in the '508 claims could create horizontal flow characteristics * * * and thereby enhance the dischargeability of materials having poor flow characteristics." The invention would not have been obvious to one of ordinary skill in the art under section 103.

C.

The court below, applying the law of double patenting articulated by the Third Circuit in Wahl v. Rexnord, found no double patenting. Carman alleges that the precedent of this circuit on double patenting is not entirely consistent with Third Circuit precedent on this issue. The precedents of this court must control, 10 but, contrary to Carman's contention, the test utilized by the Third Circuit, although not precisely in accord with our precedents, is not irreconcilable.

As a matter of legal theory, double patenting between a design and a utility patent presents significant problems. Judicial and scholarly criticism has been leveled at the concept of applying double patenting

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between a design and a utility patent. 11 Design and utility patents are based on different statutory provisions 12 and involve different subject matter. 13 The scope of protection afforded by each type of patent is different. It has been asserted that these differences entirely obviate double patenting in the design-utility setting. 14 However, there exists CCPA precedent to the effect that a double patenting rejection of a pending design or utility patent application can be sustained on the basis of a previously issued utility or design patent, respectively. 15

The Third Circuit in Wahl reversed a summary judgment of invalidity which was based on double patenting, because of the existence of material issues of fact regarding the "identity" of the claimed design and utility inventions. In doing so, the court held that double patenting can exist between a design patent and a utility patent despite the differences in subject matter with which each type of patent is concerned. The test applied by the Third Circuit to determine whether double patenting exists is whether the two patents "cross-read," i.e., claim the same thing: 16

To say that patents cross-read means that a device embodying the patentable design of the design patent must infringe the utility patent; and that a device embodying the patentable claims of the utility patent must infringe the design patent. * * * [Emphasis in original.]

In adopting the cross-reading standard, the Third Circuit in Wahl followed the decision in Ropat Corp. v. McGraw-Edison

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Co., 17 in which the Seventh Circuit sought to explain the CCPA holdings in *In re Hargraves* 18 and *In re Dubois*: 19

Those cases state that double patenting exists if the feature in which the novel esthetic effect resides is the identical feature which produces the novel function so that a structure embodying the mechanical invention would of necessity embody the design, and vice versa.

We agree with the above analysis that double patenting will be found in a design/utility situation if the two patents cross-read. Further, the precedent of this court supports a broader test of double patenting, encompassing the double patenting of obvious variations as well as of the same invention. However, rather than focusing on the point of novelty, we wish to clarify that double patenting is determined by analysis of the claims as a whole. 20

Double patenting, as applied between a design and a utility patent, is a judicially created doctrine based purely on the public policy of preventing extension of the term of a patent, even where an express statutory basis for the doctrine is lacking. Double patenting may be found in a design/utility setting "irrespective of whether the patent relied on in the rejection and the application [or patent] on appeal involve the same invention, or whether they involve inventions which are obvious variations of one another." 21 In the former situation ("same invention"-type) the test is whether the design and the utility patent claim the same subject matter. In the latter situation ("obviousness"-type), the test is whether the subject matter of the claims of the patent sought to be invalidated would have been obvious from the subject matter of the claims of the other patent, and vice versa. In considering that question, the disclosure of the "reference" patent may not be used as prior art. In certain situations, however, it may be used to define terms in a claim and to determine whether the embodiment claimed has been modified in an obvious manner. 22

In applying the above tests, there is a heavy burden of proof on one seeking to show double patenting. 23 Double patenting is rare in the context of utility versus design patents. 24

We now turn to examine the facts relating to double patenting in terms of the above guidelines. The '068 (design) patent claims the visible external surface configuration of a storage bin flow promoter, as shown in the drawing below.

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

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The claims of the '508 (utility) patent, on the other hand, are drawn to the interior construction of a flow promoter. The exterior appearance of the invention claimed in the '068 patent does not dictate the interior structure, nor does the exterior appearance disclose the function, of the invention claimed in the '508 patent. It is possible, and fully in accordance with the construction given the claims by the district court, to practice the invention claimed in the '508 patent without utilizing the claimed design. Moreover,

the court found that Vibra had indeed practiced the invention claimed in the '508 patent without utilizing the design claimed in the '068 patent. Thus, the '508 patent does not claim the "same" invention as does the '068 patent.

The question then becomes whether one patent claims an obvious variation of that which the other patent claims, and vice versa. With respect to that question, Carman has failed to sustain the heavy burden referred to above. The record is wholly inadequate to establish that it would have been obvious to a person of ordinary skill in the art to make the interior of the device according to the claims of the '508 (utility) patent simply from knowledge of the exterior configuration of the device claimed in the '068 (design) patent. Thus, even if it would have been obvious to make the invention claimed in the design patent in view of the subject matter claimed in the utility patent by simply designing the exterior and interior walls of the material-receiving member to be parallel, as Carman has attempted to prove, that alone is insufficient to establish double patenting in accordance with the two-way test set forth above.

We hold that, under the above guidelines, the '508 patent does not claim the same invention as, or an obvious variation of, the invention claimed in the '068 patent. Thus, the design patent did not, in effect, extend the beginning of the term of the utility patent. For the above reasons, the '508 patent is not invalid for double patenting. We turn now to the issue of infringement.

IV.

The district court found that the '508 patent was not literally infringed but was infringed under the doctrine of equivalents. Vibra challenges the former finding and Carman the latter. Infringement is ultimately an issue of fact 25 and, again, the trial judge's findings are not to be upset unless clearly erroneous.

A.

The finding that the claims are not literally infringed is based on the court's construction of the claims and, in particular, of the limitation "concave." The court received conflicting expert testimony on the meaning of the term "concave," as well as on the construction of claims. Additionally, the court noted various statements in the specification and claims of the '508 patent. These statements distinguish a concave form from a conical form. On the basis of this evidence, Judge Meanor concluded that the literal language of the claims was limited to a material-receiving member having compound concave sloped surfaces, to the exclusion of a conical shape.

We note that while opinion may vary with respect to the meaning of the term "concave," Judge Meanor correctly interpreted the literal language of the claims in light of the specification. In doing so he fully considered the conflicting expert testimony. He found that the distinction between conical and concave is disclosed in the specification and appears explicitly in claim 6. On the basis of these conclusions and findings we hold that the finding, that Carman's conical material-receiving member does not literally infringe the claims of the '508 patent, is not clearly erroneous. The district court's finding with respect to literal infringement is fully supported on the record.

B.

The claims were, however, held to be infringed under the doctrine of equivalents. The court first examined the invention and the alleged infringing device to ascertain if the circumstances were proper for application of the doctrine of equivalents 26--whether the accused device " 'performs substantially the same function in substantially the same way to obtain the same result.' " These circumstances are met when the alleged infringer seeks to appropriate the invention with minor modification to avoid the literal language of the claims. 27

The principal function of the invention is to promote the flow of material from the hopper. The accused infringing device also performs that function. While the accused infringing device does not perform the secondary function of stopping the flow when vibration is stopped, it was entirely proper for the court to conclude that the identity of primary function constitutes substantial identity of function for purposes of the doctrine of equivalents. There is no limitation in any of the claims in issue that would require the flow stopping function. It is apparent from the court's findings that both devices operate by inducing a similar pattern of flow through the material-receiving member. This flow is effected in both devices by the same combination of forces. The court found that the precise slope of the walls is not critical to the invention. The lateral force exerted on the flow is not substantially altered by the shape of the walls. Additionally, the same result is obtained from the invention and from the accused infringing device. We find no clear error with the finding that the accused infringing device is the legal equivalent of the invention. Therefore, we hold that application of the doctrine of equivalents was proper.

Once it is determined that the doctrine of equivalents is applicable, a finding of infringement is not certain. The doctrine of equivalents is subject to two types of limitation which may prevent a finding of infringement: (1) estoppel based on the prosecution history of the patent ("file wrapper estoppel") and (2) invalidity of the claims according to the proposed construction in view of the prior art. Estoppel, an affirmative defense, 28 was not raised below. Carman strenuously argues the second limitation, however.

The court below, in an exhaustive analysis, examined the proposed construction of the claims under the doctrine of equivalents to determine whether such construction would invalidate the claims under section 102 or 103. Its analysis is more than adequate to answer this question.

Under the doctrine of equivalents, the court considered compound straight sloped (conical) walls to be the legal equivalent of compound varying sloped (concave) walls in the material-receiving member. Even with this expansion in the scope of the claims, Judge Meanor found patentable differences between the invention and the prior art. None of the references was found to disclose compound broken-sloped walls. We agree with the district court that, in spite of the broadening effect of the doctrine of equivalents, with such construction accorded the claims they would not be invalid in view of the prior art. Thus, application of the doctrine of equivalents is not limited in this case. We find no clear error in Judge Meanor's finding that the Carman device infringes the '508 patent under the doctrine of equivalents.

V.

The '508 patent was found valid under the applicable statutory and judicial criteria of validity in view of appropriate findings of fact. We agree with the district court

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that the '508 patent is not invalid under section 102 or 103. Additionally, the patent is not invalid for double patenting under the criteria articulated in this court's precedent. Thus, we affirm the district court's conclusion that, insofar as it is challenged here, the '508 patent is valid. We find no clear error in the

findings below that the patent is infringed by Carman's device under the doctrine of equivalents, but not literally infringed. Thus, we affirm the judgment of the district court.

AFFIRMED.

NIES, Circuit Judge, concurring-in-part.

I concur in the decision that the '508 patent is not invalid for double patenting. However, I do not share the doubts that principles of double patenting should apply to design/utility patent situations. I also do not share the view that the Third Circuit standard which limited double patenting to "same invention" type is reconcilable with the decisions of the U.S. Court of Customs and Patent Appeals, e.g. *In re Thorington*, 418 F.2d 528, 537, 57 CCPA 759, 768, 163 USPQ 644, 650 (1969).

More significantly, I do not agree that in obviousness type double patenting each patent must be found obvious from the other. If one patent is obvious from the other and has the effect of extending its term, the second to issue is invalid. In this case I agree with the majority that it would not have been obvious to one of ordinary skill in the art with knowledge of the '068 design patent to make the claims of the '508 patent. Thus, the patentee has not obtained extended protection for the device claimed. Alternatively, since a device covered by the claims of the '508 patent need not take the shape claimed in the design patent, the term of the design patent is not being improperly extended by the utility patent.

Since I discern no possible extension of the term of protection of the invention of either patent, I agree that the '508 patent is not invalid for double patenting.

1 The invention is intended primarily for use in promoting the flow of difficult to handle solids, such as wet sand, clay, or wood chips, for which no method of promoting flow had proven satisfactory.

2 The district court appears to have reassessed the validity of the '508 patent in its analysis under the doctrine of equivalents. In doing so it combined the analysis of validity with that of infringement. Such an approach is potentially dangerous as it may lead to an erroneous determination of invalidity in circumstances where a conclusion of non-infringement is appropriate. The court found the claims valid under this analysis and an appropriate judgment was entered in this case. To the extent that the district court's analysis may be in error in this regard, we hold that that error is harmless. In reviewing the judgment, we apply the facts as found by the court, whether those facts were found in the "validity" or the "infringement" sections of the court's opinion.

3 *Wahl v. Rexnord, Inc.*, 624 F.2d 1169, 206 USPQ 865 (3d Cir.1980) (finding issues of material fact, reversing Judge Meanor's grant of summary judgment of invalidity of the '508 patent, and remanding the case for further proceedings).

4 Fed.R.Civ.P. 52(a).

5 We note a critical error of analysis in Carman's argument. Although related, validity and infringement are separate issues. The validity of a patent is determined under the applicable criteria of patentability. One of the limitations on the use of the doctrine of equivalents is that the claims cannot be accorded a construction that would encompass prior art. *Thomas & Betts Corp. v. Litton Syss., Inc.*, 720 F.2d 1572 (Fed.Cir. Nov. 14, 1983), rev'g *Thomas & Betts Corp. v. Winchester Elecs. Div. of Litton Syss., Inc.*, 519 F.Supp. 1191, 213 USPQ 943 (D.Del.1981). Claims should be so construed, if possible, as to sustain their validity. *Turrill v. Michigan S. & N.I.R.R. Co.*, 1 Wall. 491, 510, 68 U.S. 491, 510, 17 L.Ed. 668 (1864);

Klein v. Russell, 19 Wall. 433, 466, 86 U.S. 433, 466, 22 L.Ed. 116 (1874). If such a construction would result in invalidity of the claims, the appropriate legal conclusion is one of non-infringement, not invalidity.

6 Wahl v. Rexnord, Inc., 481 F.Supp. 573, 203 USPQ 838 (D.N.J.1979), rev'd, 624 F.2d 1169, 206 USPQ 865 (3d Cir.1980).

7 Since we reject Carman's anticipation argument based on Dumbaugh, which is the most pertinent prior art, we need not address Carman's remaining anticipation arguments.

8 The '583 patent was declared invalid under 35 U.S.C. Sec. 103 by the Seventh Circuit in Wahl v. Carrier Mfg. Co., 452 F.2d 96, 171 USPQ 195 (7th Cir.1971), cert. denied, 405 U.S. 990, 92 S.Ct. 1255, 31 L.Ed.2d 457, 173 USPQ 65 (1972).

9 Graham v. John Deere Co., 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed.2d 545, 148 USPQ 459 (1966).

10 Federal Courts Improvement Act of 1982, Pub.L. No. 97-164, 1982 U.S.CODE CONG. & AD.NEWS (96 Stat.) 25; South Corp. v. United States, 690 F.2d 1368, 1370, 215 USPQ 657, 658 (Fed.Cir.1982).

11 Gross v. Norris, 18 F.2d 418 (D.Md.1927), modified, 26 F.2d 898 (4th Cir.1928); Megley, Design and Mechanical Patents Relating to the Same Subject Matter, 44 J.P.O.S. 309 (1962); Gambrell, Mechanical and Design Inventions: Double Patenting Rejections and the Doctrine of Election, 45 N.Y.U.L.Rev. 441 (1970).

12 Section 101 of 35 U.S.C. (1976) affords the possibility of patent protection for certain classes of subject matter: process; machine; manufacture; and composition of matter. Section 171 of 35 U.S.C. (1976) affords the possibility of design patent protection for any new, original, and ornamental design for an article of manufacture.

13 Utility patents afford protection for the mechanical structure and function of an invention whereas design patent protection concerns the ornamental or aesthetic features of a design.

14 Irrespective of the wisdom or folly of taking out design patents in situations where there is any possibility of getting utility patents, the argument proceeds as follows. Since the design patent statute allows design patents only on ornamental designs for articles of manufacture, it follows logically that, at least in some settings, if double patenting were to exist between a design and a utility patent one of the two must necessarily claim inappropriate subject matter. Utility subject matter will be common to both patents. Gambrell, 45 N.Y.U.L.Rev. 441, 465. By implication, the design patent should be declared invalid for not satisfying the requirements of 35 U.S.C. Sec. 171. Gross, 18 F.2d at 421. The claims of the utility patent would presumably be spared from a declaration of invalidity for double patenting by virtue of the invalidity of the design patent. Thus, the patentee has received only one valid patent. Yet, the issue of validity of the "offending" design patent has not always been before the court, and the CCPA, in an appeal from the PTO, has held claims to be unpatentable for double patenting. In re Thorington, 418 F.2d 528, 57 CCPA 759, 163 USPQ 644 (1969), cert. denied, 397 U.S. 1038, 90 S.Ct. 1356, 25 L.Ed.2d 649, 165 USPQ 290 (1970). While this court can consider questions of validity, we note that the question whether double patenting can obtain where one of the patents is invalid is one of first impression and one that has not been raised by the parties. We make no ruling on that issue in this appeal.

15 Thorington, 418 F.2d 528, 57 CCPA 759, 163 USPQ 644 (affirming rejection of claims for a fluorescent light bulb in view of previously issued design patent for same device); In re Phelan, 205 F.2d 183, 98 USPQ 156 (1953) (affirming double patenting rejection of utility claims for a finger ring in view

of earlier issued design patent); *In re Barber*, 81 F.2d 231, 28 USPQ 187 (CCPA 1936) (affirming double patenting rejection of design claim for a flashlight cap and hanger ring because of lack of patentable distinction between claimed design and earlier utility patent); *In re Hargraves*, 53 F.2d 900, 11 USPQ 240 (CCPA 1931) (affirming double patenting rejection of claims covering a balloon tire construction in view of previously issued design patent).

16 Wahl, 624 F.2d at 1179, 206 USPQ at 871.

17 *Ropat Corp. v. McGraw-Edison Co.*, 535 F.2d 378, 381, 191 USPQ 556, 558 (7th Cir.1976). See also *Transmatic, Inc. v. Gulton Ind., Inc.*, 601 F.2d 904, 910, 202 USPQ 559, 565 (6th Cir.1979); Wahl, 624 F.2d at 1179, 206 USPQ at 871.

18 *Hargraves*, 53 F.2d 900, 11 USPQ 240.

19 *In re Dubois*, 262 F.2d 88, 120 USPQ 198 (CCPA 1958).

20 *In re Swett*, 451 F.2d 631, 59 CCPA 726, 172 USPQ 72 (1971).

21 *Thorington*, 418 F.2d at 537, 57 CCPA at 768, 163 USPQ at 650. See also *Swett*, 451 F.2d at 635, 59 CCPA at 730, 172 USPQ at 75.

22 *In re Vogel*, 422 F.2d 438, 441-42, 57 CCPA 920, 164 USPQ 619, 622 (CCPA 1970) (affirming in part a double patenting rejection in a utility/utility situation).

23 *Transmatic*, 601 F.2d at 913, 202 USPQ at 567.

24 *Swett*, 451 F.2d at 635, 59 CCPA at 730, 172 USPQ at 75.

25 *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609, 70 S.Ct. 854, 856, 94 L.Ed. 1097, 85 USPQ 328, 331 (1950); *Sealed Air Corp. v. U.S. Int'l Trade Comm'n*, 645 F.2d 976, 984, 209 USPQ 469, 476 (CCPA 1981).

26 *Graver Tank*, 339 U.S. at 608, 70 S.Ct. at 856, 85 USPQ at 330 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42, 50 S.Ct. 9, 13, 74 L.Ed. 147, 3 USPQ 40, 44 (1929)).

27 Cf. *Coleco Ind., Inc. v. U.S. Int'l Trade Comm'n*, 573 F.2d 1247, 1258, 65 CCPA 105, 118, 197 USPQ 472, 480 (1978) (Judge Rich concurring).

28 Fed.R.Civ.P. 8(c).

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50 U.S.P.Q.2d 1614
In re Anita DEMBICZAK and Benson Zinbarg, Appellants.
No. 98-1498.
United States Court of Appeals,
Federal Circuit.
April 28, 1999.

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David P. Gordon, of Stamford, Connecticut, argued for appellant. Of counsel was Thomas A. Gallagher, of Stamford, Connecticut.

John M. Whealan, Associate Solicitor, Office of the Solicitor, of Arlington, Virginia, argued for appellee. With him on the brief were Albin F. Drost, Acting Solicitor, and David R. Nicholson, Associate Solicitor.

Before MAYER, Chief Judge, MICHEL and CLEVINGER, Circuit Judges.

CLEVINGER, Circuit Judge.

Anita Dembiczak and Benson Zinbarg appeal the rejection, upheld by the Board of Patent Appeals and Interferences, of all pending claims in their Application No. 08/427,732. See *Ex Parte Dembiczak*, No. 96-2648, slip op. at 43 (May 14, 1998). Because the Board erred in sustaining rejections of the pending claims as obvious under 35 U.S.C. § 103(a) (Supp.1998), and for obviousness-type double patenting, we reverse.

I

The invention at issue in this case is, generally speaking, a large trash bag made of orange plastic and decorated with lines and facial features, allowing the bag, when filled with trash or leaves, to resemble a Halloween-style pumpkin, or jack-o'-lantern. As the inventors, Anita Dembiczak and Benson Zinbarg (collectively, "Dembiczak") note, the invention solves the long-standing problem of unsightly trash bags placed on the curbs of America, and, by fortuitous happenstance, allows users to express their whimsical or festive nature while properly storing garbage, leaves, or other household debris awaiting collection. Embodiments of the invention--sold under a variety of names, including Giant Stuff-A-Pumpkin, Funkins, Jack Sak, and Bag-O-Fun--have undisputedly been well-received by consumers, who bought more than seven million units in 1990 alone. Indeed, in 1990, the popularity of the pumpkin bags engendered a rash of thefts around Houston, Texas, leading some owners to resort to preventative measures, such as greasing the bags with petroleum jelly and tying them to trees. See R. Piller, "Halloween Hopes Die on the Vine," *Hous. Chron.*, Oct. 19, 1990, at 13A.

The road to profits has proved much easier than the path to patentability, however. In July 1989, Dembiczak filed a utility patent application generally directed to the pumpkin bags. In a February 1992 appeal, the Board of Patent Appeals and Interferences ("the Board") reversed the Examiner's rejection, but entered new grounds for rejection. Dembiczak elected to continue prosecution, filing a continuation application to address the new grounds for rejection. Thereafter, the invention made a second appearance before the Board, in April 1993, when the Board both sustained the Examiner's rejection and again entered new grounds for rejection. Again, a continuation application was filed (the instant application).

And again the Examiner's rejection was appealed to the Board, which sustained the rejection in a May 14, 1998, decision. See Dembiczak, slip op. at 43.

A

The patent application at issue includes claims directed to various embodiments of

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the pumpkin bag. Claims 37, 49, 51, 52, 58 through 64, 66 through 69, and 72 through 81 are at issue in this appeal. Though the claims vary, independent claim 74 is perhaps most representative:

74. A decorative bag for use by a user with trash filling material, the bag simulating the general outer appearance of an outer surface of a pumpkin having facial indicia thereon, comprising:

a flexible waterproof plastic trash or leaf bag having

an outer surface which is premanufactured orange in color for the user to simulate the general appearance of the outer skin of a pumpkin, and having

facial indicia including at least two of an eye, a nose and a mouth on the orange color outer surface for forming a face pattern on said orange color outer surface to simulate the general outer appearance of a decorative pumpkin with a face thereon,

said trash or leaf bag having first and second opposite ends, at least said second end having an opening extending substantially across the full width of said trash or leaf bag for receiving the trash filling material,

wherein when said trash or leaf bag is filled with trash filling material and closed, said trash or leaf bag takes the form and general appearance of a pumpkin with a face thereon.

All of the independent claims on appeal, namely 37, 52, 72, and 74, contain limitations that the bag must be "premanufactured orange in color," have "facial indicia," have openings suitable for filling with trash material, and that when filled, the bag must have a generally rounded appearance, like a pumpkin. Independent claims 37, 52, and 72 add the limitation that the bag's height must at least 36 inches. Claim 72 requires that the bag be made of a "weatherproof material," and claim 74, as shown above, requires that the bag be "waterproof." Claim 52 recites a "method of assembling" a bag with the general characteristics of apparatus claim 37.

B

The prior art cited by the Board includes:

(1) pages 24-25 of a book entitled "A Handbook for Teachers of Elementary Art," by Holiday Art Activities ("Holiday"), describing how to teach children to make a "Crepe Paper Jack-O-Lantern" out of a strip of orange crepe paper, construction paper cut-outs in the shape of facial features, and "wadded newspapers" as filling;

(2) page 73 of a book entitled "The Everything Book for Teachers of Young Children," by Martha Shapiro and Valerie Indenbaum ("Shapiro"), describing a method of making a "paper bag pumpkin" by stuffing a bag with newspapers, painting it orange, and then painting on facial features with black paint;

(3) U.S. Patent No. 3,349,991 to Leonard Kessler, entitled "Flexible Container" ("Kessler"), describing a bag apparatus wherein the bag closure is accomplished by the use of folds or gussets in the bag material;

(4) U.S. Patent No. Des. 310,023, issued August 21, 1990 to Dembiczak ("Dembiczak '023"), a design patent depicting a bag with a jack-o'-lantern face;

(5) U.S. Patent No. Des. 317,254, issued June 4, 1991 to Dembiczak ("Dembiczak '254"), a design patent depicting a bag with a jack-o'-lantern face; and,

(6) Prior art "conventional" plastic lawn or trash bags ("the conventional trash bags").

Using this art, the Board affirmed the Examiner's final rejection of all the independent claims (37, 52, 72, 74) under 35

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U.S.C. § 103, holding that they would have been obvious in light of the conventional trash bags in view of the Holiday and Shapiro references. The Board determined that, in its view of the prior art, "the only difference between the invention presently defined in the independent claims on appeal and the orange plastic trash bags of the prior art and the use of such bags resides in the application of the facial indicia to the outer surface of the bag." Dembiczak, slip op. at 18. The Board further held that the missing facial indicia elements were provided by the Holiday and Shapiro references' description of painting jack-o'-lantern faces on paper bags. See id. at 18-19. Dependent claims 49 and 79, which include a "gussets" limitation, were considered obvious under similar reasoning, except that the references cited against them included Kessler. See id. at 7.

The Board also affirmed the Examiner's obviousness-type double patenting rejection of all the independent claims in light of the two Dembiczak design patents ('023 and '254) and Holiday. See id. at 12. The Board held that the design patents depict a generally rounded bag with jack-o'-lantern facial indicia, and that the Holiday reference supplies the missing limitations, such as the "thin, flexible material" of manufacture, the orange color, the initially-open upper end, and the trash filling material. The Board also stated that the various limitations of the dependent claims--e.g., color, the inclusion of leaves as stuffing, and the dimensions--would all be obvious variations of the depictions in the Dembiczak design patents. See id. at 8-9. In addition, using a two-way test for obviousness-type double patenting, the Board held that the claims of the Dembiczak design patents "do not exclude" the additional structural limitations of the pending utility claims, and thus the design patents were merely obvious variations of the subject matter disclosed in the utility claims. See id. at 11. The Board further upheld, on similar grounds and with the inclusion of the Kessler reference, the obviousness-type double patenting rejection of dependent claim 49. See id. at 12.

This appeal followed, vesting this court with jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A) (1994).

II

 Fastcase

A claimed invention is unpatentable if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (Supp.1998); see *Graham v. John Deere Co.*, 383 U.S. 1, 14, 86 S.Ct. 684, 15 L.Ed.2d 545, 148 USPQ 459, 465 (1966). The ultimate determination of whether an invention is or is not obvious is a legal conclusion based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. See *Graham*, 383 U.S. at 17-18, 86 S.Ct. 684, 15 L.Ed.2d 545, 148 USPQ at 467; *Miles Labs., Inc. v. Shandon Inc.*, 997 F.2d 870, 877, 27 USPQ2d 1123, 1128 (Fed.Cir.1993). We therefore review the ultimate determination of obviousness without deference to the Board, while examining any factual findings for clear error. See, e.g., *In re Zurko*, 142 F.3d 1447, 1459, 46 USPQ2d 1691, 1700 (Fed.Cir.) (en banc), cert. granted, --- U.S. ---, 119 S.Ct. 401, 142 L.Ed.2d 326 (1998).

A

Our analysis begins in the text of section 103 quoted above, with the phrase "at the time the invention was made." For it is this phrase that guards against entry into the "tempting but forbidden zone of hindsight," see *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 873, 228 USPQ 90, 98 (Fed.Cir.1985), overruled on other grounds by *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 46 USPQ2d

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1097 (Fed.Cir.1998), when analyzing the patentability of claims pursuant to that section. Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See, e.g., *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed.Cir.1983). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id.*

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed.Cir.1998) (describing "teaching or suggestion or motivation [to combine]" as an "essential evidentiary component of an obviousness holding"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed.Cir.1998) ("the Board must identify specifically ... the reasons one of ordinary skill in the art would have been motivated to select the references and combine them"); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed.Cir.1992) (examiner can satisfy burden of obviousness in light of combination "only by showing some objective teaching [leading to the combination]"); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed.Cir.1988) (evidence of teaching or suggestion "essential" to avoid hindsight); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297, 227 USPQ 657, 667 (Fed.Cir.1985) (district court's conclusion of obviousness was error when it "did not elucidate any factual teachings, suggestions or incentives from this prior art that showed the propriety of combination"). See also *Graham*, 383 U.S. at 18, 86 S.Ct. 684, 15 L.Ed.2d 545, 148 USPQ at 467 ("strict observance" of factual predicates to obviousness conclusion required). Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior

art to defeat patentability--the essence of hindsight. See, e.g., *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985) ("The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time."). In this case, the Board fell into the hindsight trap.

We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed.Cir.1996), *Para-Ordnance Mfg. v. SGS Importers Intern., Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed.Cir.1995), although "the suggestion more often comes from the teachings of the pertinent references," *Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." E.g., *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed.Cir.1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of

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material fact."); *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977) ("The examiner's conclusory statement that the specification does not teach the best mode of using the invention is unaccompanied by evidence or reasoning and is entirely inadequate to support the rejection."). In addition to demonstrating the propriety of an obviousness analysis, particular factual findings regarding the suggestion, teaching, or motivation to combine serve a number of important purposes, including: (1) clear explication of the position adopted by the Examiner and the Board; (2) identification of the factual disputes, if any, between the applicant and the Board; and (3) facilitation of review on appeal. Here, however, the Board did not make particular findings regarding the locus of the suggestion, teaching, or motivation to combine the prior art references.

All the obviousness rejections affirmed by the Board resulted from a combination of prior art references, e.g., the conventional trash or yard bags, and the Holiday and Shapiro publications teaching the construction of decorated paper bags. See *Dembiczak*, slip op. at 6-7. To justify this combination, the Board simply stated that "the Holiday and Shapiro references would have suggested the application of ... facial indicia to the prior art plastic trash bags." *Id.* at 18-19. However, rather than pointing to specific information in Holiday or Shapiro that suggest the combination with the conventional bags, the Board instead described in detail the similarities between the Holiday and Shapiro references and the claimed invention, noting that one reference or the other--in combination with each other and the conventional trash bags--described all of the limitations of the pending claims. See *id.* at 18-28. Nowhere does the Board particularly identify any suggestion, teaching, or motivation to combine the children's art references (Holiday and Shapiro) with the conventional trash or lawn bag references, nor does the Board make specific--or even inferential--findings concerning the identification of the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any other factual findings that might serve to support a proper obviousness analysis. See, e.g., *Pro-Mold & Tool*, 75 F.3d at 1573, 37 USPQ2d at 1630.

To the contrary, the obviousness analysis in the Board's decision is limited to a discussion of the ways that the multiple prior art references can be combined to read on the claimed invention. For example, the Board finds that the Holiday bag reference depicts a "premanufactured orange" bag material,

see Dembiczak, slip op. at 21, finds that Shapiro teaches the use of paper bags in various sizes, including "large", see id. at 22-23, and concludes that the substitution of orange plastic for the crepe paper of Holiday and the paper bags of Shapiro would be an obvious design choice, see id. at 24. Yet this reference-by-reference, limitation-by-limitation analysis fails to demonstrate how the Holiday and Shapiro references teach or suggest their combination with the conventional trash or lawn bags to yield the claimed invention. See Rouffet, 149 F.3d at 1357, 47 USPQ2d at 1459 (noting Board's failure to explain, when analyzing the prior art, "what specific understanding or technical principle ... would have suggested the combination"). Because we do not discern any finding by the Board that there was a suggestion, teaching, or motivation to combine the prior art references cited against the pending claims, the Board's conclusion of obviousness, as a matter of law, cannot stand. See C.R. Bard, 157 F.3d at 1352, 48 USPQ2d at 1232; Rouffet, 149 F.3d at 1359, 47 USPQ2d at 1459; Fritch, 972 F.2d at 1265, 23 USPQ2d at 1783; Fine, 837 F.2d at 1075, 5 USPQ2d at 1600; Ashland Oil, 776 F.2d at 297, 227 USPQ at 667.

B

The Commissioner of Patents and Trademarks ("Commissioner") attempts to justify the Board's decision on grounds

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different from that relied upon by the Board, arguing that one of ordinary skill in the art would have been motivated to combine the references. Of course, in order to do so, the Commissioner must do what the Board did not do below: make specific findings of fact regarding the level of skill in the art ("a designer and manufacturer of trash and leaf bags, particularly one specializing in the ornamental and graphic design of such bags"), Resp't Br. at 14, the relationship between the fields of conventional trash bags and children's crafts, respectively ("[t]he artisan would also have been well aware of the ancillary, corollary, and atypical uses of 'trash' bags such as their application in hobby and art projects"), Resp't Br. at 15, and the particular features of the prior art references that would motivate one of ordinary skill in a particular art to select elements disclosed in references from a wholly different field ("a designer and manufacturer of trash and leaf bags would have recognized the paper bag in Shapiro to be a trash bag and therefore would have been motivated to combine it with the admitted prior art plastic trash and leaf bags to arrive at the claimed invention"), Resp't Br. at 15. The Commissioner also appears to cite additional references in support of his obviousness analysis, noting that at least two design patents (in the record but not cited against the presently pending claims) teach the placement of "graphical information, including text, designs, and even facial indicia, to colored bags." Resp't Br. at 16. This new analysis, apparently cut from whole cloth in view of appeal, does little more than highlight the shortcomings of the decision below, and we decline to consider it. See, e.g., In re Robertson, 169 F.3d 743, 746, 49 USPQ2d 1949, 1951 (Fed.Cir.1999) ("We decline to consider [the Commissioner's] newly-minted theory as an alternative ground for upholding the agency's decision."); In re Soni, 54 F.3d 746, 751, 34 USPQ2d 1684, 1688 (Fed.Cir.1995); In re Hounsfield, 699 F.2d 1320, 1324, 216 USPQ 1045, 1049 (Fed.Cir.1983) (rejecting an "attempt[] by the Commissioner 'to apply a new rationale to support the rejection.' "); see also 35 U.S.C. § 144 (1994) (an appeal to the Federal Circuit "is taken on the record before The Patent and Trademark Office"). Because the Board has not established a prima facie case of obviousness, see In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed.Cir.1993) ("The PTO bears the burden of establishing a case of prima facie obviousness."), we therefore reverse the obviousness rejections, and have no need to address the parties' arguments with respect to secondary factors.

III

 lastcase

Dembiczak also asks this court to reverse the Board's rejection of the pending claims for obviousness-type double patenting, which is a judicially-created doctrine that seeks to prevent the applicant from expanding the grant of the patent right beyond the limits prescribed in Title 35. See, e.g., *In re Braat*, 937 F.2d 589, 592, 19 USPQ2d 1289, 1291-92 (Fed.Cir.1991); *In re Longi*, 759 F.2d 887, 892, 225 USPQ 645, 648 (Fed.Cir.1985). See also 35 U.S.C. § 154(a)(2) (Supp.1998) (discussing patent term). The doctrine prohibits claims in a second patent which define "merely an obvious variation" of an invention claimed by the same inventor in an earlier patent. *Braat*, 937 F.2d at 592, 19 USPQ2d at 1292 (quoting *In re Vogel*, 57 C.C.P.A. 920, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)). Thus, unless a claim sought in the later patent is patentably distinct from the claims in an earlier patent, the claim must be rejected. See *In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed.Cir.1993); *Vogel*, 422 F.2d at 441, 164 USPQ at 622. This question is one of law, which we review de novo. See *Goodman*, 11 F.3d at 1052, 29 USPQ2d at 2015; *Texas Instruments Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1179, 26 USPQ2d 1018, 1029 (Fed.Cir.1993).

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A

The law provides that, in some very rare cases, obvious-type double patenting may be found between design and utility patents. See *Carman Indus., Inc. v. Wahl*, 724 F.2d 932, 939-40, 220 USPQ 481, 487 (Fed.Cir.1983) (noting that, while theoretically possible, "[d]ouble patenting is rare in the context of utility versus design patents"); *In re Thorington*, 57 C.C.P.A. 759, 418 F.2d 528, 536-37, 163 USPQ 644, 650 (CCPA 1969) (Double patenting between a design and utility patent is possible "if the features producing the novel aesthetic effect of a design patent or application are the same as those recited in the claims of a utility patent or application as producing a novel structure."); *In re Phelan*, 40 C.C.P.A. 1023, 205 F.2d 183, 98 USPQ 156 (CCPA 1953); *In re Barber*, 81 F.2d 231, 28 USPQ 187 (CCPA 1936); *In re Hargraves*, 53 F.2d 900, 11 USPQ 240 (CCPA 1931). In these cases, a "two-way" test is applicable. See *Carman*, 724 F.2d at 940, 220 USPQ at 487. Under this test, the obviousness-type double patenting rejection is appropriate only if the claims of the two patents cross-read, meaning that "the test is whether the subject matter of the claims of the patent sought to be invalidated would have been obvious from the subject matter of the claims of the other patent, and vice versa." *Id.*, 724 F.2d 932, 220 USPQ at 487. See also *Braat*, 937 F.2d at 593, 19 USPQ2d at 1292 (explaining two-way test).

B

In making its double patenting rejection, the Board concluded that all but one of the pending claims of Dembiczak's utility application would have been merely an obvious variation of the claims of the earlier-issued design patents--the Dembiczak '023 and '254 references--in light of the Holiday reference. The remaining claim, dependent claim 49, was judged obvious in light of the combination of the Dembiczak design patents, Holiday, and the Kessler reference.

Acknowledging that the two-way test was required by *Carman*, 724 F.2d at 940, 220 USPQ at 487, the Board concluded that "the design claimed in each of appellants' design patents does not exclude the features pertaining to the construction and color of the bag, the use of a plastic material for making the bag, the size or thickness of the bag ... or the use of various types of filling material.... The particular details of the facial indicia would have been a matter of design choice as evidenced by the Holiday handbook," and that therefore, in view of Holiday, the claims of the design patents were obvious variants of the pending utility patent claims. See Dembiczak, slip op. at 11. We disagree. In order for a design to be unpatentable because of obviousness, there must first be a basic design reference in the prior art, the

design characteristics of which are "basically the same as the claimed design." In re Borden, 90 F.3d 1570, 1574, 39 USPQ2d 1524, 1526 (Fed.Cir.1996); In re Rosen, 673 F.2d 388, 391, 213 USPQ 347, 350 (CCPA 1982). The phrase "having facial indicia thereon" found in the claims of the pending utility application is not a design reference that is "basically the same as the claimed design." Borden, 90 F.3d at 1574, 39 USPQ2d at 1526. In fact, it describes precious little with respect to design characteristics. The Board's suggestion that the design details were simply "a matter of design choice" evinces a misapprehension of the subject matter of design patents. E.g., Carman, 724 F.2d at 939 n. 13, 220 USPQ at 486 n. 13 ("Utility patents afford protection for the mechanical structure and function of an invention whereas design patent protection concerns the ornamental or aesthetic features of a design.") Indeed, we note that the two design patents at issue here--the Dembiczak '023 and '254 patents--were considered nonobvious over each other, and were even the subject of a restriction requirement. See 35 U.S.C. § 121 (1994) ("If two or more independent and distinct inventions are claimed in one

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application, the Commissioner may require the application to be restricted to one of the inventions."); 37 C.F.R. § 1.142. The position adopted by the Board--that a textual description of facial indicia found in the claims of the utility patent application makes obvious the specific designs claimed in the (patentably distinct) Dembiczak design patents--would presumably render obvious, or even anticipate, all design patents where a face was depicted on a bag. But this, of course, is not the law; the textual description cannot be said to be a reference "basically the same as the claimed design," of the design patents at issue here. Borden, 90 F.3d at 1574, 39 USPQ2d at 1526 (internal quotation marks omitted). The Board's conclusion of obviousness is incorrect.

Because we find that the Board erred in concluding that the design patents were obvious variants of the pending utility claims, we need not address the other prong of the two-way double patenting test--whether the pending utility claims are obvious variations of the subject matter claimed in the design patents. See Carman, 724 F.2d at 939, 220 USPQ at 487 (both prongs of the two-way test required for obviousness-type double patenting). The double patenting rejections are reversed.

IV

Because there is no evidence in the record of a suggestion, teaching, or motivation to combine the prior art references asserted against the pending claims, the obviousness rejections are reversed. In addition, because the Board misapprehended the test for obviousness-type double patenting, and because the pending utility claims do not render obvious the design patents, the double patenting rejections are also reversed.

REVERSED.

Source: USPQ, 2d Series (1986 - Present) > U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences > Ex parte Levy, 17 USPQ2d 1461 (Bd. Pat. App. & Int. 1990)

Ex parte Levy, 17 USPQ2d 1461 (Bd. Pat. App. & Int. 1990)

17 USPQ2d 1461

Ex parte Levy

U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences

No. 90-1864

Decided October 16, 1990

Headnotes

PATENTS

[1] Patentability/Validity - Anticipation - Identity of elements (► 115.0704)

Factual determination of anticipation requires disclosure in single reference of every element of claimed invention, and examiner must identify wherein each and every facet of claimed invention is disclosed in applied reference.

[2] Patentability/Validity - In general (► 115.01)

Patentability/Validity - Anticipation - Prior art (► 115.0703)

Initial burden of establishing prima facie basis to deny patentability rests upon examiner; examiner, if relying upon theory of inherency, must provide basis in fact and/or technical reasoning to reasonably support determination that allegedly inherent characteristic necessarily flows from teachings of applied prior art.

[3] Patentability/Validity - Anticipation - Prior art (► 115.0703)

Examiner erred by rejecting claims for biaxially oriented catheter balloon as anticipated by prior art which does not disclose such biaxially oriented balloon and which has not been shown to be inherently biaxially oriented.

[4] Patentability/Validity - Obviousness - Relevant prior art - Particular inventions (► 115.0903.03)

Examiner erred by rejecting claims for biaxially oriented balloon catheter under 35 USC 103 based upon combined disclosure of two prior art references, one of which was relied upon solely for disclosed use of high viscosity polyethylene terephthalate tubing and the other which was presupposed by examiner to disclose biaxially oriented catheter balloon, since examiner has not established that resulting catheter balloon using high viscosity tubing is biaxially oriented.

Case History and Disposition

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Application of Stanley B. Levy, serial no. 287,234, filed Dec. 21, 1988, which is a division of serial no. 914,108, filed Oct. 1, 1986, now Re. 32,983, granted July 4, 1989; and a reissue of serial no. 510,812,

filed July 5, 1983, now patent no. 4,490,421, granted Dec. 25, 1984, for balloon and manufacture thereof. From examiner's rejection of claims 13 through 17 and 25 (James Seidleck, primary

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examiner), applicant appeals. Reversed.

Attorneys

Louis H. Rombach, Wilmington, Del., for appellant.

Judge

Before Steiner, Tarring, and J. Smith, examiners-in-chief.

Opinion Text

Opinion By:

Steiner, examiner-in-chief.

This is an appeal from the final rejection of claims 13 through 17 and 25, which are all of the claims remaining in this application for reissue of U.S. Patent No. 4,490,421.

The subject matter on appeal is directed to a polymeric balloon exhibiting properties which enable its use as a catheter balloon for medical dilation procedures, such as coronary angioplasty wherein a catheter with a balloon at a distal end thereof is inserted into coronary arteries and inflated. The balloon must be capable of exerting sufficient pressure to dilate stenotic lesions without rupture of the balloon.

Claims 13 and 25, the only independent claims on appeal, read as follows:

13. *High molecular weight, biaxially oriented, flexible polymeric balloon having a wall tensile strength of at least 31,714 psi (218.86 MPa).*

25. *High molecular weight, biaxially oriented, flexible polyethylene terephthalate dilatation catheter balloon.*

The references relied upon by the examiner

are: Wyeth et al. (Wyeth) 3,733,309 May 15, 1973

Schjeldahl et al.

(Schjeldahl '989) 4,413,989 Nov. 8, 1983

Schjeldahl et al.

(Schjeldahl '000) 4,456,000 June 26, 1984

¹ Each of the Schjeldahl references contains essentially the same relevant disclosure. Accordingly, unless otherwise indicated, we have referred to these references collectively as "Schjeldahl," consistent with the approach adopted by both appellant and the examiner.

² See footnote 1.

Claims 13, 14, 16, 17 and 25 stand rejected under 35 U.S.C. 102 as anticipated by Schjeldahl. Claims 13 through 17 stand rejected under 35 U.S.C. 103 based upon "Schjeldahl et al in view of Wyeth as set forth in the Final Rejection" (paragraph bridging pages 3 and 4 of the Answer). We reverse each rejection.

The Rejection of Claims 13, 14, 16, 17 and 25 Under 35 U.S.C. § 102.

[1] The factual determination of anticipation requires the disclosure in a single reference of every element of the claimed invention. *In re Spada*, —F.2d —, 15 USPQ2d 1655 (Fed.Cir. 1990); *In re Bond*, —F.2d —, 15 USPQ2d 1566 (Fed.Cir. 1990); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 7 USPQ2d 1315 (Fed.Cir. 1988); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 7 USPQ2d 1057 (Fed.Cir. 1988); *Alco Standard Corp. v. TVA*, 808 F.2d 1490, 1 USPQ2d 1337 (Fed.Cir. 1986); *In re Marshall*, 578 F.2d 301, 198 USPQ 344 (CCPA 1978); *In re Arkley*, 455 F.2d 586, 172 USPQ 524 (CCPA 1972). Moreover, it is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference. *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick*, 730 F.2d 1452, 221 USPQ 481 (Fed.Cir. 1984).

Each of the independent claims on appeal defines a polymeric balloon which is "biaxially oriented." Ergo, in order to establish a *prima facie* basis to defeat the patentability of independent claims 13 and 25 under 35 U.S.C. § 102, the examiner is obliged to point out where Schjeldahl discloses a *biaxially oriented* polymeric balloon. The tenor of the final rejection and Answer presupposes that Schjeldahl discloses a biaxially oriented polymeric balloon. See, for example, page 5 of the Final Rejection wherein the examiner states

he reference clearly teaches a biaxially oriented balloon catheter, and states that it is made by injection blow molding.

See, also, page 5 of the Answer wherein the examiner states

rguments that the references don't disclose a biaxially oriented PET (polyethylene terephthalate) balloon catheter is contrary to what is *clearly stated* in the references (emphasis supplied).

The examiner does not point to, and we do not find, any express disclosure in Schjeldahl of a biaxially oriented polymeric balloon.

It would appear that the relevant evulgations in Schjeldahl which may have led the examiner to his determination are:

(a) an expander³formed *from* a thin, flexible inelastic, high tensile strength, *biaxially oriented* synthetic plastic material

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(column 2 of Schjeldahl '989, lines 63 through 65, emphasis supplied);

³ Schjeldahl characterizes the catheter balloon as an expander.

(b) The expander 30 is preferably formed *from* a suitable synthetic plastic material, such as *biaxially oriented* polypropylene, *by an injection blow molding operation* and, as such, is

substantially inelastic in both the axial and radial directions and may, for example, have a finished wall thickness in the range of from 0.005 to 0.200 millimeters, 0.025 millimeters being typical (column 6 of Schjeldahl '989, lines 45 through 52, emphasis supplied);

(c) It has been found that an expander of the above-dimensional characteristics can withstand internal inflation pressure in excess of 7 atmospheres without fear of rupture (column 6 of Schjeldahl '989, lines 62 through 65);

(d) injection blow molding step used to form the expander 30 (column 8, lines 16 and 17);

(e) the expander 30 is formed *from a biaxially oriented* thin plastic material capable of withstanding relatively high internal pressures without rupture and without exceeding the elastic limit for the material itself (column 10 of Schjeldahl '989, lines 32 through 36, emphasis supplied);

(f) the expander 82 is preferably formed *from a suitable synthetic plastic material such as biaxially oriented polypropylene or biaxially oriented polyethylene terephthalate by an injection molding operation* and, as such, is substantially inelastic in both the axial and radial direction (column 12 of Schjeldahl '989, lines 22 through 37, emphasis supplied); and

(g) Apparatus as in claim 1 wherein said non-elastic expander member comprises a longitudinally extending thin, flexible, tubular element *formed from a biaxially oriented* synthetic plastic material surrounding said outer tubular member with opposed ends thereof secured to said outer tubular member at spaced apart locations proximate said distal end thereof (claim 8 of Schjeldahl '989, emphasis supplied).

These excerpts do not justify the determination that Schjeldahl discloses a biaxially oriented polymeric balloon.

According to Schjeldahl, the *starting* material is a biaxially oriented synthetic plastic material, such as polyethylene terephthalate. The *final article*, *i.e.*, the expander or catheter balloon, is *not characterized as biaxially oriented*. Moreover, it would appear to be *undisputed* that the *only* method disclosed by Schjeldahl for transforming the biaxially oriented *starting* plastic into the *final* catheter balloon, *i.e.*, injection blow molding, is *not* capable of producing a biaxially oriented catheter balloon. In fact, it is *undisputed* that injection blow molding would *destroy* the biaxial orientation of the plastic starting material. We refer to the Belcher affidavits, Exhibits V, VI and VIII,⁴ which factually set forth the differences between "injection blow molding" and "injection stretch blow molding," and support the conclusion that the "injection blow molding" process disclosed by Schjeldahl could not possibly produce a biaxially oriented polymeric balloon.⁵

⁴ Unless otherwise indicated, all exhibits mentioned are the exhibits to appellant's Brief.

⁵ We recognize that a high burden of proof is required to demonstrate the inoperability of a United States patent. *In re Weber*, 405 F.2d 1403, 160 USPQ 549 (CCPA 1969); *In re Michalek*, 162 F.2d 229, 74 USPQ 107 (CCPA 1947). However, as noted above, Schjeldahl does not disclose a catheter balloon made of a biaxially oriented plastic. Therefore, appellant's evidence is not an attack on the operability of Schjeldahl, but quite relevant to the issue of inherency, *i.e.*, whether the catheter balloon disclosed by Schjeldahl is inherently biaxially oriented.

Indeed, the examiner agrees with appellant's position that injection blow molding could *not* produce a biaxially oriented balloon. See, for example, page 5 of the Final Rejection wherein the examiner states:

tatements that injection blow molding without stretching will not produce a biaxially oriented article are *true* ... (emphasis supplied).

The examiner goes on, in the same sentence, to state:

but since the reference produces a biaxially oriented article, clearly a stretching step must be used.

Again, on page 5 of the Answer, the examiner states:

Since Schjeldahl et al produces a biaxially oriented article it follows that a stretching step must be used in the injection blow molding process.

The inescapable facts are that Schjeldahl does not disclose a biaxially oriented catheter balloon and does not mention a stretching step.

[2] The examiner also relies upon the theory that Schjeldahl's catheter balloon is inherently biaxially oriented. On page 4 of the Answer, the examiner points out that inasmuch as the Patent and Trademark Office does not have the requisite laboratory equipment for testing, the burden shifts to appellant. However, the initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention rests

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upon the examiner. *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed.Cir. 1984). In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed.Cir. 1986); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed.Cir. 1983); *In re Oelrich*, 666 F.2d 578, 212 USPQ 323 (CCPA 1981); *In re Wilding*, 535 F.2d 631, 190 USPQ 59 (CCPA 1976); *Hansgirk v. Kemmer*, 102 F.2d 212, 40 USPQ 665 (CCPA 1939). In our opinion, the examiner has not discharged that initial burden.

Schjeldahl does not provide any working example revealing the process conditions employed to produce the catheter balloon. We have *only* a general invitation to employ "injection blow molding." As previously discussed, it is undisputed that injection blow molding would *not* have produced a biaxially oriented balloon and would have destroyed the biaxially orientation of a polymeric starting material.

Schjeldahl does not disclose any particular tensile strength of the catheter balloon. We do not find sufficient factual basis or cogent scientific reasoning to support the conclusion that Schjeldahl's disclosure with respect to the ability of the catheter balloon to "withstand an internal inflation pressure in excess of 7 atmospheres without fear of rupture" (column 6 of Schjeldahl '989, lines 63 through 65) *necessarily* means that the catheter balloon is biaxially oriented. According to the membrane equation calculations reported in Levy's declaration (Exhibit IV), Schjeldahl's balloon could not possibly exhibit the tensile characteristics of a biaxially oriented balloon. Levy's calculations are *inconsistent* with those of Pinchuk (Exhibit III). Suffice it to say, the conflicting calculations taint the factual determination of inherency with impermissible conjecture. Indeed, the examiner, in the paragraph bridging pages 4 and 5 of the Answer, states that

the membrane equation used to determine the tensil [sic, tensile] strength can be manipulated to produce any desired value, and thus is misleading.

Nevertheless, the examiner goes on to favor Pinchuk's calculations by stating in that same paragraph that

certainly use of the typically used wall thickness disclosed in Schjeldahl et al with the average radius, as done in the Pinchuk Declaration would be reasonable.

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As noted above, the conflicting results obtained by applying the membrane equation, and the examiner's acknowledgment that that equation "can be manipulated to produce any desired value," underscore the speculative nature upon which the determination of inherency rests.

We do not find sufficient cogent technical reasoning and/or objective evidence to support the conclusion that Schjeldahl's characterization of the catheter balloon as inelastic in the axial and radial direction *necessarily* means that the catheter balloon is biaxially oriented. The characteristic "inelastic," as employed by Schjeldahl, apparently means that the catheter balloon will expand to a preformed diameter to enable precise measurement of the pressures exerted on the inner wall of the artery during the dilation procedure (column 4 of Schjeldahl '989, lines 12 through 17).

[3] In summary, Schjeldahl does not disclose a biaxially oriented catheter balloon. We do not find a sufficient basis to support the determination that Schjeldahl's balloon is *inherently* (necessarily) biaxially oriented. *In re King, supra*; *W.L. Gore & Associates, Inc. v. Garlock, Inc., supra*; *In re Oelrich, supra*; *In re Wilding, supra*; *Hansgirk v. Kemmer, supra*. Accordingly, the examiner's rejection of claims 13, 14, 16, 17 and 25, under 35 U.S.C. § 102 as anticipated by Schjeldahl is *reversed*.⁶

⁶ There is evidence of record that Dupont, the assignee of the application, furnished biaxially oriented polyethylene terephthalate to Schjeldahl when he informed Dupont personnel that he required a thin, high strength polymeric film having a tensile strength in the range of 20,000-40,000 psi. See the Schjeldahl affidavit (Exhibit VIII) and the Dengler declaration executed on May 21, 1988 and appended to the protest submitted in parent application Serial No. 914,108. Such facts are not inconsistent with our determination that Schjeldahl does not disclose a biaxially oriented polyethylene terephthalate catheter balloon. The Rydell affidavit appended to the protest in the parent application does not persuade us that Schjeldahl expressly or inherently discloses a biaxially oriented polymeric catheter balloon. See Belcher's affidavit (Exhibit VI).

The Rejection of Claims 13 through 17 under 35 U.S.C. § 103 Based upon the Combined Disclosures of Schjeldahl and Wyeth.

Wyeth is directed to producing high strength biaxially oriented polyethylene terephthalate beverage containers. The disclosed method involves stretching polyethylene terephthalate having a relatively high inherent viscosity; e.g., at least about 0.85.

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It is apparent from the Final Rejection and Answer that the examiner's rejection of the appealed claims under 35 U.S.C. 103 is *not* predicated upon the theory that one having ordinary skill in the art would have been led to employ Wyeth's technique to produce a biaxially oriented balloon for use in Schjeldahl's catheter. Instead, the examiner presupposes that Schjeldahl discloses a biaxially oriented catheter balloon. The examiner relies upon Wyeth *solely* for the disclosed use of high viscosity polyethylene terephthalate tubing. We refer to page 6 of the Answer, first complete paragraph, wherein the examiner explains the rejection by stating:

Wyeth et al is not being combined with Schjeldahl et al, but merely shows the claimed high viscosity PET (polyethylene terephthalate) and supports the examiners [sic, examiner's] inherency arguments.⁷... The examiner is not substituting the process of Wyeth et al into Schjeldahl et al since both disclose the same process.⁸ Arguments that Wyeth et al can't be scaled down are irrelevant since the examiner is not seeking to scale down that reference to produce the claimed article.

⁷ Actually, according to the Final Rejection which is incorporated in the Answer,

it is the Examiner's position that it would be *prima facie* obvious to use the high viscosity polyethylene terephthalate of Wyeth in Schjeldahl et al to produce the claimed product (page 4, the only complete paragraph).

⁸ It is apparent from our reversal of the examiner's rejection under 35 U.S.C. § 102 that, in our opinion, Schjeldahl discloses neither a biaxially oriented catheter balloon nor a molding process which involves stretching.

[4] We have already concluded that the examiner factually erred in determining that Schjeldahl expressly or inherently discloses a biaxially oriented catheter balloon. Assuming, *arguendo*, the examiner correctly concluded that one having ordinary skill in the art would have been led to employ a high viscosity polyethylene terephthalate tubing in producing Schjeldahl's catheter balloon, the rejection under 35 U.S.C. § 103 must fall because the examiner has not established that the resulting catheter balloon is biaxially oriented. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed.Cir. 1988).

Inasmuch as the examiner's rejection under 35 U.S.C. § 103 is not predicated upon the theory that one having ordinary skill in the art would have been led to employ a conventional stretch blow molding technique, such as that disclosed by Wyeth, to produce Schjeldahl's catheter balloon, the motivation for such a combination is an issue which was not crystallized on appeal and was not confronted by appellant. However, in view of the examiner's gratuitous statement in the paragraph bridging pages 5 and 6 of the Answer,⁹ we are constrained to address that issue.

⁹ The noted statement provides:

Certainly in the least there was an *invitation* to make a biaxially oriented catheter balloon at the time of the Schjeldahl et al invention. Additionally injection stretch blow molding to produce biaxially oriented articles was well known at the time of the Schjeldahl et al invention (emphasis supplied).

There appears to be no dispute that one having ordinary skill in the art would have recognized the desirability of producing a biaxially oriented balloon for use in Schjeldahl's catheter, since biaxially oriented materials were known to exhibit high tensile strengths. The thrust of the evidence relied upon by the examiner is that one having ordinary skill in the art would have simply resorted to a conventional stretch molding technique to produce a biaxially oriented balloon for use in Schjeldahl's catheter, specifically, *the technique employed by Wyeth to produce a beverage container*. See paragraph 4 of the Rydell affidavit executed April 25, 1988 and offered in support of the protest in parent application Serial No. 914,108, paragraph 5 of the Pinchuk affidavit (Exhibit III), and paragraphs 4 and 5 of the Kaufman affidavit (Exhibit XII). Interestingly enough, *Wyeth disagrees*. See page 5 of Wyeth's declaration (Exhibit XI). Wyeth points out various differences between the PET bottles produced by his disclosed process and the requirements of a catheter balloon, and then concludes that his process could *not* be used to produce a catheter balloon of the type disclosed by Levy.

We are persuaded by Belcher's affidavits and Wyeth's declaration, notwithstanding the affidavits of Rydell, Pinchuk and Kaufman,¹⁰ that the known processes for producing

biaxially oriented beverage containers, such as that disclosed by Wyeth, could not have been simply scaled down to produce a biaxially oriented catheter balloon for use in medical dilation procedures without the exercise of inventive skill. ¹¹Based upon the record before us, it would appear unrealistic to conclude that one having ordinary skill in the art would have been led to employ Wyeth's technique, which is designed to produce beverage containers, to produce Schjeldahl's catheter balloon, motivated by a *reasonable expectation* of obtaining a *biaxially oriented* polymeric catheter balloon. *In re O'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 (Fed.Cir. 1988). The rejection under 35 U.S.C. § 103 is also *reversed*.

¹⁰ We agree with appellant that the credentials of Belcher and Wyeth in the relevant art appear more impressive than those of protestor's experts. According to the affidavit appearing as Appendix V, Belcher authored the chapter called "Blow Molding of Polymers" for the fifth edition of the Plastic Engineering Handbook of the Society of Plastics Industry. In addition, Belcher authored two chapters, one on "injection blow molding" and one on "stretch blow molding" for the Blow Molding Handbook of the Society of Plastics and Engineers. We consider Wyeth's opinion with respect to the capabilities of his own invention entitled to greater weight than the opinions of Rydell, Pinchuk and Kaufman.

¹¹ We find it somewhat unrealistic in light of the apparent disparities in size and function, Belcher's affidavits and Wyeth's declaration, that Pinchuk and Kaufman equate beverage bottles to catheter balloons. See paragraph 10 of the Pinchuk affidavit (Exhibit III), wherein it is stated

s a blow molded polymeric article, a bottle and a catheter balloon are equivalent.

See, also, paragraph 4 of the Kaufman affidavit (Exhibit XII), wherein it is stated that

anyone with ordinary skill in the plastics art would know how to make a biaxially oriented PET balloon; it would be similar to making a biaxially oriented PET bottle because both catheter balloons and bottles are equivalent structures - they are both fluid containers.

REVERSED.

- End of Case -

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800 F.2d 1091
55 USLW 2236, 231 U.S.P.Q. 375
In re MERCK & CO., INC.
No. 85-2740.
United States Court of Appeals, Federal Circuit.
Sept. 8, 1986.

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Charles M. Caruso of Merck & Co., Inc., Rahway, N.J., argued for appellant. With him on brief was Nels T. Lippert, of Fitzpatrick, Cella, Harper & Scinto, New York City. Of counsel were Mario A. Monaco and Michael C. Sudol, Jr., of Merck & Co., Inc., Rahway, N.J.

Richard E. Schafer, Associate Sol., Office of Sol., Arlington, Va., argued for appellee. With him on brief were Joseph F. Nakamura, Sol., and Fred E. McKelvey, Deputy Sol.

Donald R. Dunner of Finnegan, Henderson, Farabow, Garrett & Dunner, Washington, D.C., argued for intervenor Biocraft Laboratories, Inc. With him on brief were Robert D. Bajefsky and Carol P. Einaudi of Finnegan, Henderson, Farabow, Garrett & Dunner, Washington, D.C. Of counsel was Beryl L. Snyder, of Biocraft Laboratories, Inc., Elmwood Park, N.J.

Before DAVIS, BALDWIN and ARCHER, Circuit Judges.

DAVIS, Circuit Judge.

This is an appeal from a final decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences (Board), sustaining the rejection of claims 1 through 3 in the reexamination application 1 of U.S. Patent No. 3,428,735 2 (the '735 patent) as unpatentable under 35 U.S.C. Sec. 103. We affirm.

I. BACKGROUND

A. The Invention

The invention is directed to a method of treating human mental disorders; the method involves treating depression in humans by the oral administration of 5-(3-dimethylaminopropylidene)dibenzo[a, d][1, 4]cycloheptadiene (commonly known as and hereafter referred to as "amitriptyline"), or the hydrochloride or hydrobromide salts thereof, in a particular dosage range. Amitriptyline has the following chemical structure:

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

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As representative of the invention, claim 1 reads:

1. A method of treating human mental disorders involving depression which comprises orally administering to a human affected by depression 5-(3-dimethylaminopropylidene) dibenzo[a, d][1, 4]cycloheptadiene or its non-toxic salts in daily dosage of 25 to 250 mg. of said compound.

Remaining claims 2 and 3 are dependent from claim 1 and add limitations pertaining to the use of the hydrochloride and hydrobromide salts of amitriptyline, respectively.

B. Related Proceedings

On March 10, 1977 an application, Serial No. 776,464 (the '464 application), was filed for reissue of the '735 patent. 3 All the claims of the '464 application were finally rejected by the examiner under section 102 of title 35, United States Code, and alternatively under section 103 of that title. Subsequently, an appeal (Appeal No. 424-40) was taken to the Board 4 which affirmed the examiner's rejections. Additionally, the Board entered a new rejection under 35 U.S.C. Sec. 103 over a combination of references not previously cited by the examiner. In accordance with 37 C.F.R. Sec. 1.196(b) (1985) 5, appellant elected reconsideration of the '464 application by the examiner. The examiner maintained the rejection entered by the Board; in Appeal No. 480-01, the Board affirmed the examiner. The Board's decision was appealed to the Court of Customs and Patent Appeals (CCPA). Upon the motion of the Commissioner of Patents and Trademarks and on the authority of *In re Dien*, 680 F.2d 151, 214 USPQ 10 (CCPA 1982), the appeal was dismissed for lack of subject matter jurisdiction. 6

The reissue application was protested by Biocraft Laboratories, Inc. (Biocraft), intervenor in the current appeal. Biocraft is also the plaintiff in a related litigation pending in the U.S. District Court for the District of New Jersey in which the validity and infringement of the '735 patent is in issue. See *Biocraft Laboratories Inc. v. Merck & Co.*, Civil Action No. 77-0693 (D.N.J.). The district court has stayed further action in that case pending the final outcome of the pending PTO proceedings.

C. Reexamination Proceeding

Following dismissal of the reissue appeal by the CCPA, Merck & Co., Inc. (Merck), the assignee of the '735 patent, filed for and was granted a request for reexamination of the patent. As a result of prosecution before the examiner, claims 1 through 3 of the reexamination application were finally rejected under 35 U.S.C. Sec. 102 as anticipated by prior art references; the claims were also rejected under 35 U.S.C. Sec. 103 as being obvious over references cited by the Board in its new ground of rejection entered during the initial reissue appeal. Finding the '735 patent to be entitled to the benefit of the November 30, 1959 filing date of its parent application, Serial No. 855,981, the Board reversed the section 102 rejection because the effective filing date of the application antedated all the references cited therein. The Board, however, sustained the rejection for obviousness under section 103. Expressly adopting the reasonings of its earlier reissue opinions, the Board took the position that in view of the prior art, in combination,

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and a thorough knowledge of the investigative techniques used in the medicinal chemical art, the skilled artisan would have expected the known tricyclic compound, amitriptyline, to be useful as an antidepressant.

D. The References

The references relied upon by the Board were:

- (1) Rey-Bellet et al. (Rey-Bellet) U.S. Patent No. 3,384,663, May 21, 1968 (application filed Mar. 27, 1959);
- (2) Kuhn, Schweizerische Medizinische Wochenschrift, Vol. 87, No. 35-36, pp. 1135-1140 (Aug. 1957);
- (3) Lehman et al. (Lehman), Canadian Psychiatric Association Journal, "The Treatment of Depressive Conditions with Imipramine (G 22355)", vol. 3, No. 4, pp. 155-164 (Oct. 1958);
- (4) Friedman, First Symposium On Chemical Biological Correlation, "Influence of Isosteric Replacements Upon Biological Activity", pp. 296-358 (May 1950);
- (5) Burger, Journal of Chemical Education, "Rational Approaches to Drug Structure", Vol. 33, No. 8, pp. 362-372 (Aug. 1956);
- (6) Petersen et al. (Petersen), Arzneimittel-Forschung, Vol. 8, No. 7, pp. 395-397 (1958);
- (7) Roche Research Report No. 43,162, pp. 1-9 (Nov. 1957);
- (8) Roche Research Report No. 43,169, pp. 1-8 (Apr. 1958);
- (9) Roche Research Report No. 52,195, pp. 1-13 (Sept. 1958) (collectively called the "Roche Reports").

The Rey-Bellet patent disclosed amitriptyline and its hydrochloride salt. Properties of amitriptyline taught by the reference included a "manifold activity upon the central nervous system," as well as pharmacological and medicinal properties, such as "narcosis-potentiating, adrenolytic, sedative, antihistaminic, antiemetic, antipyretic and hypothermic." Rey-Bellet did not disclose or otherwise teach that amitriptyline possessed antidepressive properties.

The Kuhn publication disclosed the compound, imipramine, and taught that the compound was a very effective antidepressant in humans. Imipramine has the chemical structure

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

and differs from the structure of amitriptyline only in the replacement of the unsaturated carbon atom in the center ring with a nitrogen atom. Kuhn taught a recommended dosage of 75-150 mg per day--possibly 200-250 mg if the smaller doses proved ineffective.

The Lehman publication disclosed the results of a Canadian study of the effects of imipramine on the symptoms of depression in humans. This article confirmed, for the most part, the teachings of the Kuhn article.

The object of the Friedman publication was "to survey the history of isosterism, to classify the varieties of isosteric replacements which are recorded in the literature, and to note the influence of these replacements on the biological activity of compounds." Friedman defined isosteres as atoms, ions or molecules in which the peripheral layers of electrons can be considered identical. Compounds which fit this broad definition and exhibit the same biological activity were termed "bioisosteric." Further, with respect to the medicinal chemists' use of the theory of "isosteric replacement" or "bio-isosteric replacement" as a tool to predict the properties of compounds, Friedman commented that:

[t]o the synthetic organic chemist interested in medicinal chemistry, every physiologically active compound of known structure is a challenge--a challenge either to better it, or perhaps merely to equal it....

There are numerous ways of attacking such a problem.... One of the methods which has been used frequently, very

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often with success, is that of isosteric replacement. The examples of this type of replacement in the literature are very numerous, and the fruitful results in the fields of sulfonamides, antimetabolites, and antihistamines are well known.

Friedman at page 296. Finally, Friedman disclosed various atoms or groups of atoms as bioisosteric, including the interchange of oxygen and the unsaturated carbon atom which often resulted in similar biological activity. Friedman, however, did not disclose or otherwise teach as bioisosteric the interchange of the nitrogen and unsaturated carbon atoms.

The Burger publication also discussed the theory of "bioisosterism" and its usefulness in designing new drugs based upon the knowledge of "lead" compounds.

The Petersen publication taught, inter alia, the properties of chlorpromazine (a phenothiazine derivative) and chlorprothixene (a 9-amino-alkylene-thioxanthene derivative), these compounds having the following structural formulas:

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

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Petersen concluded that, when the nitrogen atom located in the central ring of the phenothiazine compound is interchanged with an unsaturated carbon atom as in the corresponding 9-amino-alkylene-thioxanthene compound, the pharmacological properties of the thioxanthene derivatives resemble very strongly the properties of the corresponding phenothiazines. Using the theory of isosteric replacement, Petersen predicted this similarity in properties:

Structural chemical considerations permitted the expectation that the 9-aminoalkylene-thioxanthenes ... would show great similarity to the corresponding phenothiazines. They should be more similar in their behavior to that of the phenothiazines than the saturated 9-aminoalkyl-thioxanthenes. From the physical point of view the π -electron distributions (sites of π -electrons) are almost the same in the phenothiazine derivatives and in the 9-aminoalkylene-thioxanthenes with their stabilizing conjugated double linkage between C9 in the thioxanthene ring and the first C-atom of the side chain.

Petersen at page 3. The compounds were disclosed as having a strong central depressive, i.e., tranquillizing, action in animals.

The Roche Reports revealed the results from tests comparing the pharmacological properties of amitriptyline and imipramine. The reports indicated that the two compounds were very similar in a variety of properties, including their action as tranquilizers having narcosis-potentiating effects. Because of this similarity and because amitriptyline and imipramine were structurally related, Roche scientists concluded

that amitriptyline should be clinically tested for depression alleviation--a known property of imipramine. In the pharmacological guideline for the clinical testings of amitriptyline (which was labelled Roche Preparation Ro 4-1575), the Roche Reports stated that

[i]t is to be noted that a "tofranil-like effect" is already to be expected by using a dose 1/4- 1/2 that of Tofranil. Side effects which can appear ... are sedative and atropine-like effects, such as appear also with Tofranil. 7

We must decide in this appeal whether appellant's invention would have been *prima facie* obvious over the available prior art of record; and, if so obvious, whether

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the *prima facie* case has been rebutted by evidence of unexpected results.

II. DISCUSSION

In its opinion on this problem, the Board expressly followed the guidelines of *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 86 S.Ct. 684, 693-694, 15 L.Ed.2d 545, 148 USPQ 459, 466-67 (1966), and made findings on factual inquiries specifically set forth in that decision. These factual findings must be accepted unless they are clearly erroneous. *In re Wilder*, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed.Cir.1984), cert. denied, 469 U.S. 1209, 105 S.Ct. 1173, 84 L.Ed.2d 323 (1985); *In re De Blauwe*, 736 F.2d 699, 703, 222 USPQ 191, 193 (Fed.Cir.1984); accord *Stock Pot Restaurant, Inc. v. Stockpot, Inc.*, 737 F.2d 1576, 1578-79, 222 USPQ 665, 666-67 (Fed.Cir.1984). In this case we do not hold the Board's factual findings--as to the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the art--to be clearly erroneous and accordingly we have followed them in our statement of the prior art and we now follow them in our analysis of the legal issue of obviousness.

Prima Facie Obviousness: The prior art taught that amitriptyline and imipramine are both psychotropic drugs which react on the central nervous system and which were known in the art prior to the time of appellant's invention. Imipramine was known to possess antidepressive properties in humans. While amitriptyline was known to possess psychotropic properties such as sedative and narcosis-potentiating properties, the drug was not known to be an antidepressant. However, the prior art has shown that imipramine and amitriptyline are unquestionably closely related in structure. Both compounds are tricyclic dibenzo compounds and differ structurally only in that the nitrogen atom located in the central ring of imipramine is interchanged with an unsaturated carbon atom in the central ring of amitriptyline. To show obviousness, it was necessary to determine from knowledge already available in the art at the time of appellant's invention that one skilled in the medicinal chemical art would have expected amitriptyline, like imipramine, to be useful in the treatment of depression in humans. *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963).

As found by the Board, the Roche Reports recognized the structural relationship between amitriptyline and imipramine and concluded that amitriptyline should be tested for its antidepressant activities. In fact, the Roche Reports expressly stated that amitriptyline was expected to resemble imipramine clinically in its depression alleviation effects.

"Structural similarity, alone, may be sufficient to give rise to an expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). However, the Board did not rest its conclusion of obviousness on structural similarity alone.

Rather, the Board further recognized that in attempting to predict the biological activities of a drug, a skilled medicinal chemist would not proceed randomly, but would base his attempts on the available knowledge of prior research techniques, and literature used in his field. The prior art showed that one such technique was "bioisosteric replacement" or the theory of bioisosterism--where the substitution of one atom or group of atoms for another atom or group of atoms having similar size, shape and electron density provides molecules having the same type of biological activity. Finding that the Friedman, Burger and Petersen references taught that bioisosterism was commonly used by medicinal chemists prior to 1959 in an effort to design and predict drug activity, the Board concluded that one of ordinary skill in the arts would have been aware of this technique at the time of appellant's invention. 8 Further, the Board

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found that Petersen taught as bioisosteric the interchange of the nitrogen and unsaturated carbon atoms--the precise structural difference between imipramine and amitriptyline. 9

We see no clear error in the Board's determination as to the teachings of the prior art references, in combination. In view of these teachings, which show a close structural similarity and a similar use (psychotropic drugs) between amitriptyline and imipramine, one of ordinary skill in the medicinal chemical arts, possessed of the knowledge of the investigative techniques used in the field of drug design and pharmacological predictability, would have expected amitriptyline to resemble imipramine in the alleviation of depression in humans. Accordingly, we agree with the Board that appellant's invention was *prima facie* obvious over the prior art of record.

In traversing the Board's decision of obviousness, appellant has urged that the Board's decision was premised on an impermissible "obvious to try" standard. Appellant contends that there was no motivation in the prior art to arrive at appellant's invention. "[O]bvious to try is not the standard of 35 U.S.C. Sec. 103." *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977) (emphasis omitted). Rather, the test is whether the references, taken as a whole, would have suggested appellant's invention to one of ordinary skill in the medicinal chemical arts at the time the invention was made. *In re Simon*, 461 F.2d 1387, 1390, 174 USPQ 114, 116 (CCPA 1972). Clearly, amitriptyline and imipramine, both known psychotropic drugs, are closely structurally related. The expectation that the similar structures would behave similarly was suggested in the Roche Reports. In combination with those teachings, the prior art teaching that the precise structural difference between amitriptyline and imipramine involves a known bioisosteric replacement provides sufficient basis for the required expectation of success, without resort to hindsight. 10 Obviousness does not require absolute predictability. *In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976). Only a reasonable expectation that the beneficial result will be achieved is necessary to show obviousness. *In re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651 (Fed.Cir.1985).

We also find untenable appellant's arguments that Petersen teaches away from appellant's invention. Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Thus, Petersen must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole. That teaching is that the interchange of the nitrogen and the unsaturated carbon atoms is isosteric and compounds so modified are

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expected to possess similar biological properties.

Neither are we persuaded by appellant's contention that the Board erred in relying on the contemporaneous independent invention of others to support its holding of obviousness. 11 As we have said earlier, the teachings of the prior art references in combination adequately support the Board's conclusion. However, the additional, although unnecessary, evidence of contemporaneous invention is probative of "the level of knowledge in the art at the time the invention was made." In re Farrenkopf, 713 F.2d 714, 720, 219 USPQ 1, 6 (Fed.Cir.1983).

Unexpected Results: A prima facie case of obviousness can be rebutted by evidence of unexpected results. In re Davies, 475 F.2d 667, 670, 177 USPQ 381, 384 (CCPA 1973). In rebuttal of the PTO's prima facie case appellant has asserted that, as compared to imipramine, amitriptyline unexpectedly has a more potent sedative and a stronger anticholinergic effect. In support of this contention, appellant has relied on an affidavit of Dr. Joseph J. Schildkraut, 12 a psychiatrist and a Professor of Psychiatry at Harvard, and also on a published record of a symposium of physicians and psychiatrists concerned with the treatment of the depressed patient. 13

Dr. Schildkraut's affidavit recognizes some pharmacological differences between amitriptyline and imipramine including the fact that amitriptyline is a more potent sedative and has a stronger anticholinergic effect than imipramine. Further, Dr. Schildkraut notes that depressed patients have responded differently to amitriptyline and imipramine, some responding to one and not the other or more favorably to one than to the other. For the most part, the record of the cited symposium confirms the differences noted in the Schildkraut affidavit. 14 That record also counseled practicing physicians on choosing from the spectrum of tricyclic antidepressants (a term which includes amitriptyline and imipramine) the particular drug useful for an individual patient.

After a careful consideration of all the evidence, we are persuaded that the Board did not err in determining that the alleged unexpected properties of amitriptyline are not so unexpectedly different from the properties of imipramine, the closest prior art, as to overcome the prima facie showing of obviousness. The prior art of record clearly taught that amitriptyline was a known sedative. 15 The evidence before us (which was, of course, before the Board) further revealed that all tricyclic antidepressant drugs, in general, possess the secondary properties of sedative and anticholinergic effects. Specifically, the record showed that during the prosecution of the reissue application, appellant submitted an article entitled "Using the tricyclic antidepressants" which included a table comparing the properties of known tricyclic antidepressant drugs. 16 Included in these properties were sedative and anticholinergic effects of the known antidepressants. 17

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Thus, it appears that the alleged difference in properties between amitriptyline and imipramine is a matter of degree rather than kind. Moreover, as to the sedative effects, the article revealed only a slight difference between the two compounds. Amitriptyline was characterized as "highly sedative" while imipramine was only "somewhat less [sedative] than amitriptyline." 18 Regarding the anticholinergic effect, the article showed that both drugs have anticholinergic effects but to a different degree. These are not truly unexpected results. The Board found in one of its reissue opinions (incorporated in the reexamination decision now on appeal): "[i]n regard to the sedative and anticholinergic properties of amitriptyline, we are not convinced that the side effects of this material [amitriptyline] are significantly or unexpectedly different from the level of those properties exerted by the closest prior art antidepressant, imipramine." 19

The core of it is that, while there are some differences in degree between the properties of amitriptyline and imipramine, the compounds expectedly have the same type of biological activity. In the absence of evidence to show that the properties of the compounds differed in such an appreciable degree that the difference was really unexpected, we do not think that the Board erred in its determination that appellant's evidence was insufficient to rebut the prima facie case. The fact that amitriptyline and imipramine, respectively, helped some patients and not others does not appear significant. As noted by the Board, a difference in structure, although slight, would have been expected to produce some difference in activity.

In sum, we hold that the claimed invention would have been obvious to one of ordinary skill in the art. Accordingly, the decision of the Board is

AFFIRMED.

BALDWIN, Circuit Judge, dissenting.

The rejection by the board is flawed because it did not analyze the invention according to the requirement of 35 U.S.C. Sec. 103. The board wrote:

The issue before us in considering the instant claims on their merits for patentability is whether the artisan having the requisite skill in the pertinent art area and a knowledge of the available prior art would have been motivated to employ amitriptyline in the treatment of human depression.

That is, whether it would have been obvious to try amitriptyline as an antidepressant. Guided by the disclosure of the applicant, the board pieced together information from various patents, journal articles, and papers, and concluded:

It remains our position that one having ordinary skill in this art are[sic] would have been familiar with the concept of bioisosterism and because of this knowledge would have concluded that the known compound, i.e., amitriptyline, would be potentially useful as an antidepressant. [Emphasis ours.]

That is, it would have been obvious to try amitriptyline as an antidepressant. Obvious-to-try is not the test for patentability under 35 U.S.C. Sec. 103. This court and its predecessor, the CCPA, have repeatedly rejected that approach. *In re Goodwin*, 576 F.2d 375, 377, 198 USPQ 1, 3 (CCPA 1978); *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977); *In re Lindell*, 385 F.2d 453, 455, 155 USPQ 521, 523 (CCPA 1967); *In re Tomlinson*, 363 F.2d 928, 150 USPQ 623 (CCPA 1966); *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963); see also *In re Grabiak*, 769 F.2d 729, 226 USPQ 870 (Fed.Cir.1985).

Congress has also rejected that approach by enacting the second sentence of 35 U.S.C. Sec. 103, which states "[p]atentability shall not be negated by the manner in

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which the invention was made." The reviser's note on this sentence states "it is immaterial whether it resulted from long toil and experimentation or from a flash of genius."

The obvious-to-try analysis is an attack on the method of making an invention that specifically penalizes people in areas of endeavor where advances are won only by great effort and expense. The

pharmaceutical field is particularly hard hit because there is an overabundance of structures that are obvious to try. Consider, for example, the Petersen reference which the majority cites to demonstrate the possibility that a nitrogen atom may be replaced by a double-bonded carbon atom. This journal article records an attempt to find drugs useful for the treatment of endogenous psychoses, i.e., tranquilizers. The researchers tested eighteen chemicals with closely related structures. These materials were injected into mice, and compared for their ability to make the mice fall asleep. The results of these tests may be tantalizing and useful, but only as a guide for further research. I agree that, based on this information and the other references cited by the board, the researcher with ordinary skill in the art would be motivated to investigate the possibility of substituting a double-bonded carbon atom for nitrogen. The researcher would also be motivated to test every other structural variation in Petersen, as well as a host of others. Under an obvious-to-try analysis, any of these structures which ultimately is shown to be effective as an antidepressant in human beings would be unpatentable because the researcher dared to follow a logical plan.

The board and the majority also err by reading too much certainty into the teachings of the references. They have not considered the references as a whole. Friedman discusses the phenomenon that compounds with similar chemical structures sometimes behave in a similar fashion in a biological system. Once such a compound has been tested and found to have the same biological activity, it is called "bio-isosteric." 1

Friedman also teaches that an isosteric compound "may have the same activity as the original, or more usually it may have an antagonistic effect." (Emphasis added.) Friedman explains that in order to predict biological activity with accuracy, one ideally should know (1) the mechanism by which the original drug acts and (2) what part of the structure of the original drug is critical to the original drug activity. 2 That reference also unequivocally states that comparisons should be made in living systems, but such information is not easily available. That reference relies on in vitro testing, and it specifically states that in vitro results may or may not correlate with clinical studies. It also clearly states that, for the purposes of its discussion, biological activities such as absorption, distribution, conjugation (detoxification), taste, odor and side effects of drugs will be ignored. Friedman concludes that compounds with similar structures need not be bio-isosteric.

The Burger reference does discuss bio-isosterism and its usefulness in designing new drugs. Its evaluation of bio-isosterism as a tool for predicting drug activity is as follows:

However, if one can achieve a gradual change of biological behavior and follow it accurately at each step of minor structural alteration, one is bound to enhance one property, suppress another, and ultimately arrive at a drug suitable for therapy. Shortcuts to this disconcertingly tedious process have not been found, and this is probably responsible for the still

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prevailing opinion that new useful drugs will be discovered most easily by more or less empirical procedures.

at page 369, and

Slight stereochemical or structural changes may alter considerably the biological role of a compound. Patient variation of at least a reasonable number of structures is still the only answer to this question.

at page 370.

The Roche reports contain background information about various pharmacological effects of amitriptyline. The information was derived from testing for its toxicity and tranquilizing effect on animals. This information would be essential to a decision to clinically test the drug. It is not sufficient to show the drug would be useful for treating human beings. Congress gave pragmatic recognition to the difficulty of determining whether a new drug is useful by its enactment of the 1962 amendment to 21 U.S.C. Sec. 321. That action was taken in response to problems caused by another tranquilizer, thalidomide.

Neither these references, nor the other references cited by the board and the majority purport to teach the worker with ordinary skill in the art that amitriptyline is a drug that is useful for treating depression in human beings. That conclusion is steps removed from the information presented by these sources. I would reverse.

1 Ex Parte Merck and Co., Reexamination No. 90/000264, Appeal No. 607-66 (PTO Bd.Pat.App. & Int., May 28, 1985), JA p. 7. In its opinion the Board expressly adopted the reasonings in its earlier reissue (for the '735 patent) opinions, Ex Parte Edward L. Engelhardt, Reissue Application No. 776,464, Appeal No. 424-40 (PTO Bd.Pat.App., Apr. 23, 1980), JA p. 13 and Ex Parte Edward L. Engelhardt, Reissue Application No. 776,464, Appeal No. 480-01 (PTO Bd.Pat.App., Feb. 25, 1982), JA p. 23.

2 U.S. Patent No. 3,428,735, issued to Edward L. Engelhardt on February 18, 1969, was based on patent application Serial No. 662,907 filed August 24, 1967 as a continuation-in-part of patent application Serial No. 855,981 filed Nov. 30, 1959.

3 The reissue application was filed as a "no defect" type reissue under the then existing 37 C.F.R. Sec. 1.175(a)(4) (1980). That provision has now been repealed.

4 At that time, the Board of Patent Appeals and Interferences was called the Board of Patent Appeals.

5 37 C.F.R. Sec. 1.196(b) provides that when the Board of Appeals determines a new ground of rejection, the appellant may

(1) after submitting appropriate amendments or showing of facts, have the matter reconsidered by the examiner;

(2) waive reconsideration before the examiner and have the case reconsidered by the Board; or

(3) treat the decision, including the new ground of rejection, as a final decision in the case.

6 See In the Matter of the Application of Edward L. Engelhardt, Appeal No. 82-611 (CAFC Oct. 28, 1982) (order granting motion to dismiss).

7 Tofranil is a tradename used for imipramine.

8 Appellant submitted the declaration of Dr. Paul N. Craig, an experienced medicinal chemist, JA p. 372. His view was that the concept of bioisosterism could not be used in 1959 to predict the antidepressant effects in amitriptyline or the pharmacological differences between imipramine and amitriptyline. Dr. Craig stated:

[I]n my opinion "isosterism" in 1959 afforded no basis for predicting the specific pharmaceutical utility in humans, and it is my belief that that is still true today.... I do not believe the carryover of tranquilizing activity from chlorpromazine to chlorprothixene afforded a reasonable basis for predicting the carryover of antidepressant properties from imipramine to amitriptyline.

Affidavit of Paul N. Craig, JA, pp. 374-75.

Plainly the Board was not clearly erroneous in discounting that testimony. There was independent evidence in the record to the contrary. The Friedman, Burger and Petersen references recognize that concept as a means of predicting biological properties in isosterically-related compounds prior to 1959.

9 Petersen even went so far as to suggest that the apparent bioisosteric relationship between the interchange of the nitrogen and unsaturated carbon atoms led to the design of chlorprothixene in the expectation that the compound would share the same biological activity as chlorpromazine. See Petersen, *supra*, at p. 395.

10 The teachings of the Roche Reports as well as the Petersen reference distinguish this case from *In re Grabiak*, 769 F.2d 729, 731, 226 USPQ 870, 871 (Fed.Cir.1985) ("there is no motive in the cited art to make the modification required to arrive at appellants' compounds").

11 Ex Parte Edward L. Engelhardt, Appeal No. 424-40, *supra* note 1, at pp. 23-24, JA pp. 22(1)-22(m), where the Board indicated that evidence before it revealed that four other groups of inventors independently and contemporaneously discovered amitriptyline's antidepressant properties using reasoning based on a thorough knowledge of investigative techniques, which included the concept of isosterism, used in the medicinal art area.

12 Affidavit of Joseph J. Schildkraut, JA p. 366.

13 Symposium, Depression Today--Experts Answer Your Questions, JA p. 309.

14 Dr. Schildkraut was a member of the symposium.

15 Rey-Bellet, *supra*, col. 2, line 16.

16 Patient Care, "Using the Tricyclic Antidepressants," pp. 28-33, 35-36, 39-40, 43-45, 49-52, 57-58, 63-64, 67-68, 71, 73-76, 78, 81, 84-85, (May 15, 1979); see also Commission's Appendix, pp. CA 17-45.

17 See also the Symposium, Depression Today--Experts Answer Your Questions, *supra* note 13, at p. 315, where Dr. Hollister indicates that when choosing from the spectrum of tricyclic antidepressant drugs, the choice is based on three pharmacological actions including (1) the amount of sedation (2) the amount of anticholinergic effect and (3) the nature of the drugs in primarily blocking the uptake of serotonin or norepinephrine.

18 Patient Care, "Using the Tricyclic Antidepressants," *supra* note 16, at p. 50.

19 Ex Parte Edward L. Engelhardt, Appeal No. 480-01, *supra* note 1, at p. 12, JA p. 34.

1 The term "bio-isosteric" therefore is simply a conclusion drawn after testing. The label is properly limited to the system and purpose for which the compounds were tested. For example, two drugs could be bio-isosteric with respect to making mice fall asleep, and not bio-isosteric when tested at a particular

dosage level for the treatment of high blood pressure in human beings. The theory of bio-isosterism as used by the board and majority is nothing more or less than an analysis of structural obviousness.

2 Neither this reference nor any of the others purport to disclose either piece of information.

enting rejection would be appropriate. In particular, see paragraph II.B.1. for the analysis required to determine the propriety of an obviousness-type double patenting rejection.<

II. REQUIREMENTS OF A DOUBLE PATENTING REJECTION (INCLUDING PROVISIONAL REJECTIONS)

When a double patenting rejection is appropriate, it must be based either on statutory grounds or nonstatutory grounds. The ground of rejection employed depends upon the relationship of the inventions being claimed. Generally, a double patenting rejection is not permitted where the claimed subject matter is presented in a divisional application as a result of a restriction requirement made in a parent application under 35 U.S.C. 121.

Where the claims of an application are substantively the same as those of a first patent, they are barred under 35 U.S.C. 101 - the statutory basis for a double patenting rejection. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor" Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957). Where the claims of an application are not the "same" as those of a first patent, but the grant of a patent with the claims in the application would unjustly extend the rights granted by the first patent, a double patenting rejection under nonstatutory grounds is proper.

In determining whether a proper basis exists to enter a double patenting rejection, the examiner must determine the following:

(A) Whether a double patenting rejection is prohibited by the third sentence of 35 U.S.C. 121 (see MPEP § 804.01; if such a prohibition applies, a double patenting rejection cannot be made);

(B) Whether a statutory basis exists; and

(C) Whether a nonstatutory basis exists.

Each determination must be made on the basis of all the facts in the application before the examiner.

Charts I-A, I-B, II-A, and II-B illustrate the methodology of making such a determination.

Domination and double patenting should not be confused. They are two separate issues. One patent or application "dominates" a second patent or application when the first patent or application has a broad or generic claim which fully encompasses or reads on an invention defined in a narrower or more specific claim in another patent or application. Domination by itself, i.e., in the absence of statutory or nonstatutory double patenting grounds, cannot support a double patenting rejection. *In re Kaplan*, 789 F.2d 1574, 1577-78, 229 USPQ 678, 681 (Fed. Cir. 1986); and *In re Sarrett*, 327 F.2d 1005, 1014-15, 140 USPQ 474, 482 (CCPA 1964). However, the presence of domination does not preclude double patenting. See, e.g., *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968).

A. Statutory Double Patenting — 35 U.S.C. 101

In determining whether a statutory basis for a double patenting rejection exists, the question to be asked is: Is the same invention being claimed twice? 35 U.S.C. 101 prevents two patents from issuing on the same invention. "Same invention" means identical subject matter. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).

A reliable test for double patenting under 35 U.S.C. 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. For example, the invention defined by a claim reciting a compound having a "halogen" substituent is not identical to or substantively the same as a claim reciting the same compound except having a "chlorine" substituent in place of the halogen because "halogen" is broader than "chlorine." On the other hand, claims may be differently worded and still define the same invention. Thus, a claim reciting a widget having a length of "36 inches" defines the

same invention as a claim reciting the same widget having a length of “3 feet.”

If it is determined that the same invention is being claimed twice, 35 U.S.C. 101 precludes the grant of the second patent regardless of the presence or absence of a terminal disclaimer. *Id.*

Form paragraphs 8.30 and 8.31 (between an issued patent and one or more applications) or 8.32 (provisional rejections) may be used to make statutory double patenting rejections.

¶ 8.30 35 U.S.C. 101, Statutory Basis for Double Patenting “Heading” Only

A rejection based on double patenting of the “same invention” type finds its support in the language of 35 U.S.C. 101 which states that “whoever invents or discovers any new and useful process... may obtain a patent therefor...” (Emphasis added). Thus, the term “same invention,” in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Examiner Note:

The above form paragraph must be used as a heading for all subsequent double patenting rejections of the statutory (same invention) type using either of form paragraphs 8.31 or 8.32.

¶ 8.31 Rejection, 35 U.S.C. 101, Double Patenting

Claim [1] rejected under 35 U.S.C. 101 as claiming the same invention as that of claim [2] of prior U.S. Patent No. [3]. This is a double patenting rejection.

Examiner Note:

1. This form paragraph must be preceded by form paragraph 8.30 and is used only for double patenting rejections of the same invention claimed in an earlier patent; that is, the “scope” of the inventions claimed is identical.
2. If the conflicting claims are in another copending application, do not use this form paragraph. A provisional double patenting rejection should be made using form paragraph 8.32.
3. Do not use this form paragraph for nonstatutory-type double patenting rejections. If nonstatutory type, use appropriate form paragraphs 8.33 to 8.39.
4. This form paragraph may be used where the conflicting patent and the pending application are:
 - (a) by the same inventive entity, or
 - (b) by a different inventive entity and are commonly assigned even though there is no common inventor, or
 - (c) not commonly assigned but have at least one common inventor, or

(d) made as a result of activities undertaken within the scope of a joint research agreement.

5. In bracket 3, insert the number of the conflicting patent.

6. If the patent is to a different inventive entity and is commonly assigned with the application, form paragraph 8.27 should additionally be used to require the assignee to name the first inventor.

7. If evidence is of record to indicate that the patent is prior art under either 35 U.S.C. 102(f) or (g), a rejection should also be made using form paragraphs 7.15 and/or 7.19 in addition to this double patenting rejection.

8. If the patent is to a different inventive entity from the application and the effective U.S. filing date of the patent antedates the effective filing date of the application, a rejection under 35 U.S.C. 102(e) should additionally be made using form paragraph 7.15.02.

¶ 8.32 Provisional Rejection, 35 U.S.C. 101, Double Patenting

Claim [1] provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim [2] of copending Application No. [3]. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Examiner Note:

1. This form paragraph must be preceded by form paragraph 8.30 and is used only for double patenting rejections of the same invention claimed in another copending application; that is, the scope of the claimed inventions is identical.
2. If the conflicting claims are from an issued patent, do not use this paragraph. See form paragraph 8.31.
3. Do not use this paragraph for nonstatutory-type double patenting rejections. See form paragraphs 8.33 to 8.39.
4. This form paragraph may be used where the conflicting claims are in a copending application that is:
 - (a) by the same inventive entity, or
 - (b) by a different inventive entity and is commonly assigned even though there is no common inventor, or
 - (c) not commonly assigned but has at least one common inventor, or
 - (d) made as a result of activities undertaken within the scope of a joint research agreement.
5. Form paragraph 8.28 may be used along with this form paragraph to resolve any remaining issues relating to priority under 35 U.S.C. 102(f) or (g).
6. In bracket 3, insert the number of the conflicting application.
7. A provisional double patenting rejection should also be made in the conflicting application.
8. If the copending application is by a different inventive entity and is commonly assigned, form paragraph 8.27 should additionally be used to require the assignee to name the first inventor.
9. If evidence is also of record to show that either application is prior art unto the other under 35 U.S.C. 102(f) or (g), a rejection should also be made in the other application using form paragraphs 7.15 and/or 7.19 in addition to this provisional double patenting rejection.
10. If the applications do not have the same inventive entity and effective U.S. filing date, a provisional 102(e) rejection should

additionally be made in the later-filed application using form paragraph 7.15.01.

If the “same invention” is not being claimed twice, an analysis must be made to determine whether a non-statutory basis for double patenting exists.

B. Nonstatutory Double Patenting

A rejection based on nonstatutory double patenting is based on a judicially created doctrine grounded in public policy so as to prevent the unjustified or improper timewise extension of the right to exclude granted by a patent. *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re White*, 405 F.2d 904, 160 USPQ 417 (CCPA 1969); *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968); *In re Sarett*, 327 F.2d 1005, 140 USPQ 474 (CCPA 1964).

1. Obviousness-Type

>A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); and *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).< In determining whether a nonstatutory basis exists for a double patenting rejection, the first question to be asked is — does any claim in the application define an invention that is >anticipated by, or is< merely an obvious variation of >,< an invention claimed in the patent? If the answer is yes, then an “obviousness-type” nonstatutory double patenting rejection may be appropriate. Obviousness-type double patenting requires rejection of an application claim when the claimed subject matter is **not patentably distinct** from the subject matter claimed in a commonly owned patent, or a non-commonly owned patent but subject to a joint research agreement as set forth in 35 U.S.C. 103(c)(2) and (3), when the issuance of a second patent would provide unjustified

extension of the term of the right to exclude granted by a patent. See *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 58 USPQ2d 1869 (Fed. Cir. 2001); *Ex parte Davis*, 56 USPQ2d 1434, 1435-36 (Bd. Pat. App. & Inter. 2000).

A double patenting rejection of the obviousness-type>, if not based on an anticipation rationale,< is “analogous to [a failure to meet] the nonobviousness requirement of 35 U.S.C. 103” except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, *>the< analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

Since the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection, the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis. These factual inquiries are summarized as follows:

(A) Determine the scope and content of a patent claim relative to a claim in the application at issue;

(B) Determine the differences between the scope and content of the patent claim as determined in (A) and the claim in the application at issue;

(C) Determine the level of ordinary skill in the pertinent art; and

(D) Evaluate any objective indicia of nonobviousness.

The conclusion of obviousness-type double patenting is made in light of these factual determinations.

Any obviousness-type double patenting rejection should make clear:

(A) The differences between the inventions defined by the conflicting claims — a claim in the patent compared to a claim in the application; and

(B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue >is anticipated by, or< would have

been an obvious variation of >,< the invention defined in a claim in the patent.

When considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279, 23 USPQ2d 1839, 1846 (Fed. Cir. 1992). This does not mean that one is precluded from all use of the patent disclosure.

The specification can be used as a dictionary to learn the meaning of a term in the patent claim. *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1299, 53 USPQ2d 1065, 1067 (Fed. Cir. 1999) (“[W]ords in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning.”); *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250, 48 USPQ2d 1117, 1122 (Fed. Cir. 1998) (“Where there are several common meanings for a claim term, the patent disclosure serves to point away from the improper meanings and toward the proper meanings.”). See also MPEP § 2111.01. Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970). The court in *Vogel* recognized “that it is most difficult, if not meaningless, to try to say what is or is not an obvious variation of a claim,” but that one can judge whether or not the invention claimed in an application is an obvious variation of an embodiment disclosed in the patent which provides support for the patent claim. According to the court, one must first “determine how much of the patent disclosure pertains to the invention claimed in the patent” because only “[t]his portion of the specification supports the patent claims and may be considered.” The court pointed out that “this use of the disclosure is not in contravention of the cases forbidding its use as prior art, nor is it applying the patent as a reference under 35 U.S.C. 103, since only the disclosure of the invention claimed in the patent may be examined.”

(a) One-Way Obviousness

If the application at issue is the later filed application or both are filed on the same day, only a one-way determination of obviousness is needed in resolving the issue of double patenting, i.e., whether the invention defined in a claim in the application would have been >anticipated by, or< an obvious variation of >,< the invention defined in a claim in the patent. See, e.g., *In re Berg*, 140 F.3d 1438, 46 USPQ2d 1226 (Fed. Cir. 1998) (the court applied a one-way test where both applications were filed the same day). If a claimed invention in the application would have been obvious over a claimed invention in the patent, there would be an unjustified timewise extension of the patent and an obvious-type double patenting rejection is proper. Unless a claimed invention in the application would have been >anticipated by, or< obvious over a claimed invention in the patent, no double patenting rejection of the obvious-type should be made, but this does not necessarily preclude a rejection based on another type of nonstatutory double patenting (see MPEP § 804, paragraph II.B.2. below).

Similarly, even if the application at issue is the earlier filed application, only a one-way determination of obviousness is needed to support a double patenting rejection in the absence of a finding: (A) of administrative delay on the part of the Office causing delay in prosecution of the earlier filed application; and (B) that applicant could not have filed the conflicting claims in a single (i.e., the earlier filed) application. See MPEP § 804, paragraph II.B.1.(b) below.

Form paragraph 8.33 and the appropriate one of form paragraphs 8.34 - 8.37 may be used to make nonstatutory rejections of the obvious-type.

(b) Two-Way Obviousness

If the patent is the later filed application, the question of whether the timewise extension of the right to exclude granted by a patent is justified or unjustified must be addressed. A two-way test is to be applied only when the applicant could not have filed the claims in a single application *and* there is administrative delay. *In re Berg*, 46 USPQ2d 1226 (Fed. Cir. 1998) (“The two-way exception can only apply when the applicant could not avoid separate filings, and even then, only if the PTO controlled the rates of prosecution to cause the later filed species claims to issue before the claims for a genus in an earlier application

... In Berg's case, the two applications could have been filed as one, so it is irrelevant to our disposition who actually controlled the respective rates of prosecution."). In the absence of administrative delay, a one-way test is appropriate. *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993) (applicant's voluntary decision to obtain early issuance of claims directed to a species and to pursue prosecution of previously rejected genus claims in a continuation is a considered election to postpone by the applicant and not administrative delay). Unless the record clearly shows administrative delay by the Office and that applicant could not have avoided filing separate applications, the examiner may use the one-way obviousness determination and shift the burden to applicant to show why a two-way obviousness determination is required.

When making a two-way obviousness determination where appropriate, it is necessary to apply the *Graham* obviousness analysis twice, once with the application claims as the claims in issue, and once with the patent claims as the claims in issue. Where a two-way obviousness determination is required, an obvious-type double patenting rejection is appropriate only where each analysis compels a conclusion that the invention defined in the claims in issue is an obvious variation of the invention defined in a claim in the other application/patent. If either analysis does not compel a conclusion of obviousness, no double patenting rejection of the obvious-type is made, but this does not necessarily preclude a nonstatutory double patenting rejection based on the fundamental reason to prevent unjustified timewise extension of the right to exclude granted by a patent. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968).

Although a delay in the processing of applications before the Office that would cause patents to issue in an order different from the order in which the applications were filed is a factor to be considered in determining whether a one-way or two-way obviousness determination is necessary to support a double patenting rejection, it may be very difficult to assess whether an applicant or the administrative process is primarily responsible for a delay in the issuance of a patent. On the one hand, it is applicant who presents claims for examination and pays the issue fee. On the other hand, the resolution of legitimate differences of opinion that must be resolved in an appeal process or

the time spent in an interference proceeding can significantly delay the issuance of a patent. Nevertheless, the reasons for the delay in issuing a patent have been considered in assessing the propriety of a double patenting rejection. Thus, in *Pierce v. Allen B. DuMont Laboratories, Inc.*, 297 F.2d 323, 131 USPQ 340 (3d. Cir. 1961), the court found that administrative delay may justify the extension of patent rights beyond 17 years but "a considered election to postpone acquisition of the broader [patent after the issuance of the later filed application] should not be tolerated." In *Pierce*, the patentee elected to participate in an interference proceeding [after all claims in the application had been determined to be patentable] whereby the issuance of the broader patent was delayed by more than 7 years after the issuance of the narrower patent. The court determined that the second issued patent was invalid on the ground of double patenting. Similarly, in *In re Emert*, 124 F.3d 1458, 44 USPQ2d 1149 (Fed. Cir. 1997), the court found that the one-way test is appropriate where applicants, rather than the Office, had significant control over the rate of prosecution of the application at issue. In support of its finding that the applicants were responsible for delaying prosecution of the application during the critical period, the court noted that the applicants had requested and received numerous time extensions in various filings. More importantly, the court noted, after initially receiving an obviousness rejection of all claims, applicants had waited the maximum period to reply (6 months), then abandoned the application in favor of a substantially identical continuation application, then received another obviousness rejection of all claims, again waited the maximum period to reply, and then again abandoned the application in favor of a second continuation application substantially identical to the original filing. On the other hand, in *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 23 USPQ2d 1839 (Fed. Cir. 1992), the court elected not to hold the patentee accountable for a delay in issuing the first filed application until after the second filed application issued as a patent, even where the patentee had intentionally refiled the first filed application as a continuation-in-part after receiving a Notice of Allowance indicating that all claims presented were patentable. Similarly, where, through no fault of the applicant, the claims in a later filed application issue first, an obvious-type double

patenting rejection is improper, in the absence of a two-way obviousness determination, because the applicant does not have complete control over the rate of progress of a patent application through the Office. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991). While acknowledging that allowance of the claims in the earlier filed application would result in the timewise extension of an invention claimed in the patent, the court was of the view that the extension was justified under the circumstances in this case, indicating that a double patenting rejection would be proper only if the claimed inventions were obvious over each other — a two-way obviousness determination.

Form paragraph 8.33 and the appropriate one of form paragraphs 8.34-8.37 may be used to make non-statutory rejections of the obvious type.

¶ 8.33 Basis for Nonstatutory Double Patenting, "Heading" Only

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A non-statutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Examiner Note:

This form paragraph is to be used as a heading before a non-statutory double patenting rejection using any of form paragraphs 8.34 - 8.39.

¶ 8.34 Rejection, Obviousness Type Double Patenting - No Secondary Reference(s)

Claim [1] rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim [2] of U.S. Patent No. [3]. Although the conflicting claims are not identical, they are not patentably distinct from each other because [4].

Examiner Note:

1. This form paragraph is used for obviousness-type double patenting rejections based upon a patent.
2. If the obviousness-type double patenting rejection is based upon another application, do not use this form paragraph. A provisional double patenting rejection should be made using form paragraph 8.33 and either form paragraph 8.35 or 8.37.
3. This form paragraph may be used where the conflicting invention is claimed in a patent which is:
 - (a) by the same inventive entity, or
 - (b) by a different inventive entity and is commonly assigned even though there is no common inventor, or
 - (c) not commonly assigned but has at least one inventor in common, or
 - (d) made as a result of activities undertaken within the scope of a joint research agreement.
4. Form paragraph 8.33 must precede any one of form paragraphs 8.34 to 8.39 and must be used only ONCE in an Office action.
5. In bracket 3, insert the number of the patent.
6. If evidence indicates that the conflicting patent is prior art under 35 U.S.C. 102(f) or (g), a rejection should additionally be made under 102(f)/103(a) or 102(g)/103(a) using form paragraph 7.21, unless the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.
7. If the patent is to a different inventive entity and has an earlier effective U.S. filing date, a rejection under 35 U.S.C. 102(e)/103(a) may be made using form paragraph 7.21.02. For applications pending on or after December 10, 2004, rejections under 35 U.S.C. 102(e)/103(a) should not be made or maintained if the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

¶ 8.35 Provisional Rejection, Obviousness Type Double Patenting - No Secondary Reference(s)

Claim [1] provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim [2] of copending Application No. [3]. Although the conflicting claims are not identical, they are not patentably distinct from each other because [4].

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Examiner Note:

1. This form paragraph should be used when the conflicting claims are in another copending application.
2. If the conflicting claims are in a patent, do not use this form paragraph. Use form paragraphs 8.33 and 8.34.
3. This form paragraph may be used where the conflicting claims are in a copending application that is:
 - (a) by the same inventive entity, or

- (b) commonly assigned even though there is no common inventor, or
- (c) not commonly assigned but has at least one common inventor, or
- (d) made as a result of activities undertaken within the scope of a joint research agreement.

4. Form paragraph 8.33 must precede any one of form paragraphs 8.34 to 8.39 and must be used only ONCE in an Office action.

5. If the conflicting application is currently commonly assigned but the file does not establish that the conflicting inventions were commonly owned at the time the later invention was made, form paragraph 8.28 may be used in addition to this form paragraph to also resolve any issues relating to priority under 102(f) and/or (g).

6. In bracket 3, insert the number of the conflicting application.

7. A provisional obviousness-type double patenting rejection should also be made in the conflicting application.

8. If evidence shows that either application is prior art unto the other under 35 U.S.C. 102(f) or (g) and the copending application has not been disqualified under 35 U.S.C. 103(c) as prior art in a 103(a) rejection, a rejection should additionally be made in the other application under 35 U.S.C. 102(f)/103(a) or 102(g)/103(a) using form paragraph 7.21.

9. If the disclosure of one application may be used to support a rejection of the other and the applications have different inventive entities and different U.S. filing dates, use form paragraph 7.21.01 to additionally make a rejection under 35 U.S.C. 102(e)/103(a) in the later filed application. For applications pending on or after December 10, 2004, rejections under 35 U.S.C. 102(e)/103(a) should not be made or maintained if the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

10. In bracket 4, provide appropriate rationale for obviousness of claims being rejected over the claims of the cited application.

¶ 8.36 Rejection, Obviousness Type Double Patenting - With Secondary Reference(s)

Claim [1] rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim [2] of U.S. Patent No. [3] in view of [4]. [5]

Examiner Note:

1. This form paragraph is used for obviousness-type double patenting rejections where the primary reference is a conflicting patent.
2. If the obviousness double patenting rejection is based on another application, do not use this form paragraph. A provisional obviousness-type double patenting rejection should be made using form paragraphs 8.33 and either 8.35 or 8.37.
3. This form paragraph may be used where the prior invention is claimed in a patent which is:
 - (a) by the same inventive entity, or
 - (b) by a different inventive entity and is commonly assigned even though there is no common inventor, or
 - (c) not commonly assigned but has at least one common inventor, or
 - (d) made as a result of activities undertaken within the scope of a joint research agreement.

4. Form paragraph 8.33 must precede any one of form paragraphs 8.34 to 8.39 and must be used only ONCE in an office action.

5. In bracket 3, insert the number of the conflicting patent.

6. In bracket 4, insert the secondary reference.

7. In bracket 5, insert an explanation of the obviousness-type rejection.

8. If evidence shows that the conflicting patent is prior art under 35 U.S.C. 102(f) or (g), a rejection should additionally be made under 35 U.S.C. 102(f)/103(a) or 102(g)/103(a) using form paragraph 7.21, unless the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

9. If the patent issued to a different inventive entity and has an earlier effective U.S. filing date, a rejection under 35 U.S.C. 102(e)/103(a) may be made using form paragraph 7.21.02. For applications pending on or after December 10, 2004, rejections under 35 U.S.C. 102(e)/103(a) should not be made or maintained if the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

¶ 8.37 Provisional Rejection, Obviousness Type Double Patenting - With Secondary Reference(s)

Claim [1] provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim [2] of copending Application No. [3] in view of [4]. [5]

This is a provisional obviousness-type double patenting rejection.

Examiner Note:

1. This form paragraph is used for obviousness-type double patenting rejections where the primary reference is a conflicting application.
2. If the conflicting claims are in a patent, do not use this form paragraph, use form paragraph 8.36.
3. This form paragraph may be used where the conflicting claims are in a copending application that is:
 - (a) by the same inventive entity, or
 - (b) commonly assigned even though there is no common inventor, or
 - (c) not commonly assigned but has at least one common inventor, or
 - (d) made as a result of activities undertaken within the scope of a joint research agreement.
4. Form paragraph 8.33 must precede any one of form paragraphs 8.34 to 8.39 and must be used only ONCE in an office action.
5. If the conflicting cases are currently commonly assigned but the file does not establish that the conflicting inventions were commonly owned at the time the later invention was made, form paragraph 8.28 may be used in addition to this form paragraph to also resolve any issues relating to priority under 35 U.S.C. 102(f) and/or (g).
6. In bracket 3, insert the number of the conflicting application.
7. In bracket 4, insert the secondary reference.
8. In bracket 5, insert an explanation of the obviousness-type rejection.
9. A provisional obviousness-type double patenting rejection should also be made in the conflicting application.

10. If evidence shows that either application is prior art unto the other under 35 U.S.C. 102(f) or (g) and the copending application has not been disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection, a rejection should additionally be made under 35 U.S.C. 102(f)/103(a) or 102(g)/103(a) using form paragraph 7.21.

11. If the disclosure of one application may be used to support a rejection of the other and the applications have different inventive entities and different U.S. filing dates, use form paragraph 7.21.01 to additionally make a rejection under 35 U.S.C. 102(e)/103(a) in the application with the later effective U.S. filing date. For applications pending on or after December 10, 2004, rejections under 35 U.S.C. 102(e)/103(a) should not be made or maintained if the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

2. Another Type of Nonstatutory Double Patenting Rejection

There are some unique circumstances where it has been recognized that another type of nonstatutory double patenting rejection is applicable even where the inventions claimed in two or more applications/patents are considered nonobvious over each other. These circumstances are illustrated by the facts before the court in *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). In affirming the double patenting rejection, the court summed up the situation:

in appellant's own terms: The combination ABC was old. He made two improvements on it, (1) adding X and (2) adding Y, the result still being a unitary clip of enhanced utility. While his invention can be practiced in the forms ABCX or ABCY, the greatest advantage and best mode of practicing the invention as disclosed is obtained by using both inventions in the combination ABCXY. His first application disclosed ABCXY and other matters. He obtained a patent claiming [a clip comprising] BCX and ABCX, . . . so claiming these combinations as to cover them *no matter what other feature is incorporated in them*, thus covering effectively ABCXY. He now, many years later, seeks more claims directed to ABCY and ABCXY. Thus, protection he already had would be extended, albeit in somewhat different form, for several years beyond the expiration of his patent, were we to reverse.

397 F.2d at 355-56, 158 USPQ at 216 (emphasis in original).

The court recognized that "there is no double patenting in the sense of claiming the same invention because ABCX and ABCY are, in the technical patent law sense, different inventions. The rule against 'double patenting,' however, is not so circumscribed. The fundamental reason for the rule is to *prevent unjusti-*

fied timewise extension of the right to exclude granted by a patent no matter how the extension is brought about. To . . . prevail here, appellant has the burden of establishing that the invention claimed in his patent is 'independent and distinct' from the invention of the appealed claims...appellant has clearly not established the independent and distinct character of the inventions of the appealed claims." 397 F.2d at 354-55, 158 USPQ at 214-15 (emphasis in original). The court observed:

The controlling fact is that patent protection for the clips, fully disclosed in and covered by the claims of the patent, would be extended by allowance of the appealed claims. Under the circumstance of the instant case, wherein we find no valid excuse or mitigating circumstances making it either reasonable or equitable to make an exception, and wherein there is no terminal disclaimer, the rule against "double patenting" must be applied.

397 F.2d at 355, 158 USPQ at 215.

The decision in *In re Schneller* did not establish a rule of general application and thus is limited to the particular set of facts set forth in that decision. The court in *Schneller* cautioned "against the tendency to freeze into rules of general application what, at best, are statements applicable to particular fact situations." *Schneller*, 397 F.2d at 355, 158 USPQ at 215. Nonstatutory double patenting rejections based on *Schneller* **will be rare**. The Technology Center (TC) Director must approve any nonstatutory double patenting rejections based on *Schneller*. If an examiner determines that a double patenting rejection based on *Schneller* is appropriate in his or her application, the examiner should first consult with his or her supervisory patent examiner (SPE). If the SPE agrees with the examiner then approval of the TC Director must be obtained before such a nonstatutory double patenting rejection can be made.

A fact situation similar to that in *Schneller* was presented to a Federal Circuit panel in *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986). Kaplan had been issued a patent on a process of making chemicals in the presence of an organic solvent. Among the organic solvents disclosed and claimed as being useful were tetraglyme and sulfolane. One unclaimed example in the patent was specifically directed to a mixture of these two solvents. The claims in the application to Kaplan and Walker, the application before the Office, were directed to essentially the same chemical process, but requiring the use

of the solvent mixture of tetraglyme and sulfolane. In reversing the double patenting rejection, the court stated that the mere fact that the broad process claim of the patent requiring an organic solvent reads on or “dominates” the narrower claim directed to basically the same process using a specific solvent mixture does not, *per se*, justify a double patenting rejection. The court also pointed out that the double patenting rejection improperly used the disclosure of the joint invention (solvent mixture) in the Kaplan patent specification as though it were prior art.

A significant factor in the *Kaplan* case was that the broad invention was invented by Kaplan, and the narrow invention (i.e., using a specific combination of solvents) was invented by Kaplan and Walker. Since these applications (as the applications in *Braat*) were filed before the Patent Law Amendments Act of 1984 (Pub. Law 98-622, November 8, 1984) amending 35 U.S.C. 116 to expressly authorize filing a patent application in the names of joint inventors who did not necessarily make a contribution to the invention defined in each claim in the patent, it was necessary to file multiple applications to claim both the broad and narrow inventions. Accordingly, there was a valid reason, driven by statute, why the claims to the specific solvent mixture were not presented for examination in the Kaplan patent application.

Each double patenting situation must be decided on its own facts.

Form paragraph 8.33 and the appropriate one of form paragraphs 8.38 (between an issued patent and one or more applications) and 8.39 (provisional rejections) may be used to make this type of nonstatutory double patenting rejection.

¶ 8.38 Double Patenting - Nonstatutory (Based Solely on Improper Timewise Extension of Patent Rights) With a Patent

Claim [1] rejected on the ground of nonstatutory double patenting over claim [2] of U.S. Patent No. [3] since the claims, if allowed, would improperly extend the “right to exclude” already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: [4]

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Examiner Note:

1. This form paragraph should only be used where approval from the TC Director to make a nonstatutory double patenting rejection based on *In re Schneller* has been obtained.
2. Use this form paragraph only when the subject matter of the claim(s) is fully disclosed in, and covered by at least one claim of, an issued U.S. Patent which is commonly owned or where there is common inventorship (one or more inventors in common).
3. In bracket 3, insert the number of the patent.
4. In bracket 4, insert a description of the subject matter being claimed which is covered in the patent.
5. Form paragraph 8.33 must precede any one of form paragraphs 8.34 to 8.39 and must be used only ONCE in an Office action.
6. If evidence indicates that the conflicting patent is prior art under 35 U.S.C. 102(f) or (g), a rejection should additionally be made under 35 U.S.C. 102(f)/103(a) or 102(g)/103(a) using form paragraph 7.21, unless the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.
7. If the patent is to another inventive entity and has an earlier U.S. filing date, a rejection under 35 U.S.C. 102(e)/103(a) may be made using form paragraph 7.21.02. For applications pending on or after December 10, 2004, rejections under 35 U.S.C. 102(e)/103(a) should not be made or maintained if the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

¶ 8.39 Double Patenting - Nonstatutory (Based Solely on Improper Timewise Extension of Patent Rights) With Another Application

Claim [1] provisionally rejected on the ground of nonstatutory double patenting over claim [2] of copending Application No. [3]. This is a provisional double patenting rejection because the conflicting claims have not in fact been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: [4]

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Examiner Note:

1. This form paragraph should only be used where approval from the TC Director to make a nonstatutory double patenting rejection based on *In re Schneller* has been obtained.
2. Use this form paragraph only when the subject matter of the claim(s) is fully disclosed in, and covered by at least one claim of, another copending application which is commonly owned or where there is common inventorship (one or more inventors in common).
3. In bracket 3, insert the number of the conflicting application.
4. In bracket 4, insert a description of the subject matter being claimed which is covered in the copending application.

5. Form paragraph 8.33 must precede any one of form paragraphs 8.34 to 8.39 and must be used only ONCE in an office action.

6. If the conflicting application is currently commonly assigned but the file does not establish that the conflicting inventions were commonly owned at the time the later invention was made, form paragraph 8.28 may be used in addition to this form paragraph to also resolve any issues relating to priority under 35 U.S.C. 102(f) and/or (g).

7. A provisional double patenting rejection should also be made in the conflicting application.

8. If evidence shows that either application is prior art unto the other under 35 U.S.C. 102(f) or (g) and the copending application has not been disqualified (as prior art in a 103 rejection based on common ownership), a rejection should additionally be made in the other application under 35 U.S.C. 102(f)/103(a) or 102(g)/103(a) using form paragraph 7.21, unless the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

9. If the disclosure of one application may be used to support a rejection of the other and the applications have different inventive entities and different U.S. filing dates, use form paragraph 7.21.01 to additionally make a rejection under 35 U.S.C. 102(e)/103(a) in the application with the later effective U.S. filing date. For applications pending on or after December 10, 2004, rejections under 35 U.S.C. 102(e)/103(a) should not be made or maintained if the patent is disqualified under 35 U.S.C. 103(c) as prior art in a 35 U.S.C. 103(a) rejection.

3. Design/Plant — Utility Situations

Double patenting issues may be raised where an applicant has filed both a utility patent application (35 U.S.C. 111) and either an application for a plant patent (35 U.S.C. 161) or an application for a design patent (35 U.S.C. 171). In general, the same double patenting principles and criteria that are applied in utility-utility situations are applied to utility-plant or utility-design situations. Double patenting rejections in utility-plant situations may be made in appropriate circumstances.

Although double patenting is rare in the context of utility versus design patents, a double patenting rejection of a pending design or utility application can be made on the basis of a previously issued utility or design patent, respectively. *Carman Indus. Inc. v. Wahl*, 724 F.2d 932, 220 USPQ 481 (Fed. Cir. 1983). The rejection is based on the public policy preventing the extension of the term of a patent. Double patenting may be found in a design-utility situation irrespective of whether the claims in the patent relied on in the rejection and the claims in issue involve the same invention, or whether they involve inventions which

are obvious variations of one another. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

In *Carman Indus.*, the court held that no double patenting existed between a design and utility patent since the claims in the utility patent, drawn to the interior construction of a flow promoter, were not directed to the same invention or an obvious variation of the invention claimed in a design patent directed to the visible external surface configuration of a storage bin flow promoter. The majority opinion in this decision appears to indicate that a two-way obviousness determination is necessary in design-utility cases. 724 F.2d at 940-41, 220 USPQ at 487-88. But see *Carman Indus.* (J. Nies, concurring).

In *Thorington*, the court affirmed a double patenting rejection of claims for a fluorescent light bulb in a utility patent application in view of a previously issued design patent for the same bulb. In another case, a double patenting rejection of utility claims for a finger ring was affirmed in view of an earlier issued design patent, where the drawing in both the design patent and the utility application illustrated the same article. *In re Phelan*, 205 F.2d 183, 98 USPQ 156 (CCPA 1953). A double patenting rejection of a design claim for a flashlight cap and hanger ring was affirmed over an earlier issued utility patent. *In re Barber*, 81 F.2d 231, 28 USPQ 187 (CCPA 1936). A double patenting rejection of claims in a utility patent application directed to a balloon tire construction was affirmed over an earlier issued design patent. *In re Hargraves*, 53 F.2d 900, 11 USPQ 240 (CCPA 1931).

III. CONTRAST BETWEEN DOUBLE PATENTING REJECTION AND REJECTIONS BASED ON PRIOR ART

Rejections over a patent or another copending application based on double patenting or 35 U.S.C. 103(a) are similar in the sense that both require comparison of the claimed subject matter with at least part of the content of another patent or application, and both may require that an obviousness analysis be made. However, there are significant differences between a rejection based on double patenting and one based on 35 U.S.C. 102(e) prior art under 35 U.S.C. 103(a). *In re Barfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

and not merely the chance result of a method or of a combination of functional elements (35 U.S.C. 171; 35 U.S.C. 112, first and second paragraphs). See *Blisscraft of Hollywood v. United Plastics Co.*, 189 F. Supp. 333, 127 USPQ 452 (S.D.N.Y. 1960), 294 F.2d 694, 131 USPQ 55 (2d Cir. 1961).

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1502.01 Distinction Between Design and Utility Patents [R-2]

In general terms, a “utility patent” protects the way an article is used and works (35 U.S.C. 101), while a “design patent” protects the way an article looks (35 U.S.C. 171). The ornamental appearance for an article includes its shape/configuration or surface ornamentation *>applied to< the article, or both. Both design and utility patents may be obtained on an article if invention resides both in its utility and ornamental appearance.

While utility and design patents afford legally separate protection, the utility and ornamentality of an article may not be easily separable. ** >Articles of manufacture may possess both functional and ornamental characteristics.<

Some of the more common differences between design and utility patents are summarized below:

(A) The term of a utility patent on an application filed on or after June 8, 1995 is 20 years measured from the U.S. filing date; or if the application contains a specific reference to an earlier application under 35 U.S.C. 120, 121, or 365(c), 20 years from the earliest effective U.S. filing date, while the term of a design patent is 14 years measured from the date of grant (see 35 U.S.C. 173).

(B) Maintenance fees are required for utility patents (see 37 CFR 1.20), while no maintenance fees are required for design patents.

(C) Design patent applications include only a single claim, while utility patent applications can have multiple claims.

(D) Restriction between plural, distinct inventions is discretionary on the part of the examiner in utility patent applications (see MPEP § 803), while it is mandatory in design patent applications (see MPEP § 1504.05).

(E) An international application naming various countries may be filed for utility patents under the Patent Cooperation Treaty (PCT), while no such provision exists for design patents.

(F) Foreign priority under 35 U.S.C. 119(a)-(d) can be obtained for the filing of utility patent applications up to 1 year after the first filing in any country subscribing to the Paris Convention, while this period is only 6 months for design patent applications (see 35 U.S.C. 172).

(G) Utility patent applications may claim the benefit of a provisional application under 35 U.S.C. 119(e) whereas design patent applications may not. See 35 U.S.C. 172 and 37 CFR 1.78 (a)(4).

(H) A Request for Continued Examination (RCE) under 37 CFR 1.114 may only be filed in utility and plant applications filed under 35 U.S.C. 111(a) on or after June 8, 1995, while RCE is not available for design applications (see 37 CFR 1.114(e)).

(I) * >Effective July 14, 2003, continued< prosecution application (CPA) practice under 37 CFR 1.53(d) is >only< available for design applications **>(see 37 CFR 1.53(d)(1)(i)). Prior to July 14, 2003, CPA practice was< available for utility and plant applications only where the prior application has a filing date prior to May 29, 2000 **.

(J) Utility patent applications filed on or after November 29, 2000 are subject to application publication under 35 U.S.C. 122(b)(1)(A), whereas design applications are not subject to application publication (see 35 U.S.C. 122(b)(2)).

Other distinctions between design and utility patent practice are detailed in this chapter. Unless otherwise provided, the rules for applications for utility patents are equally applicable to applications for design patents (35 U.S.C. 171 and 37 CFR 1.151).

1503 Elements of a Design Patent Application [R-2]

A design patent application has essentially the elements required of an application for a utility patent filed under 35 U.S.C. 101 (see Chapter 600). The arrangement of the elements of a design patent application and the sections of the specification are as specified in 37 CFR 1.154.

have overall appearances that are basically the same as each other.

When a traversal specifically points out the supposed errors in a restriction, examiners must reevaluate the requirement in view of these remarks. If the restriction requirement is to be maintained, it must be repeated and made final in the next Office action and the arguments answered. See MPEP § 821.01. No application should be allowed on the next Office action where a response to a restriction requirement includes an election with traverse, unless the traversal is withdrawn in view of a telephone interview, or the examiner withdraws the restriction requirement.

1504.06 Double Patenting [R-5]

There are generally two types of double patenting rejections. One is the “same invention” type double patenting rejection based on 35 U.S.C. 171 which states in the singular that an inventor “may obtain a patent.” The second is the “nonstatutory-type” double patenting rejection based on a judicially created doctrine grounded in public policy and which is primarily intended to prevent prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent. Nonstatutory double patenting includes rejections based on one-way determination of obviousness, and two-way determination of obviousness.

The charts in MPEP § 804 outline the procedure for handling all double patenting rejections.

Double patenting rejections are based on a comparison of the claims in a patent and an application or between two applications; the disclosure of the patent or application may be relied upon only to define the claim. 35 U.S.C. 171 specifically states that “a patent” may be obtained if certain conditions are met; this use of the singular makes it clear that only one patent may issue for a design.

Determining if a double patenting rejection is appropriate involves answering the following inquiries: Is the same design being claimed twice? If the answer is yes, then a rejection under 35 U.S.C. 171 should be given on the grounds of “same invention” type double patenting. If not, are the designs directed to patentably indistinct variations of the same inventive concept? If the answer is yes, then a rejection based on the nonstatutory type double patenting should be given.

Double patenting rejections are based on a comparison of claims. While there is a direct correlation between the drawings in a design application and the claim, examiners must be aware that no such correlation is necessary in a utility application or patent. Several utility patents may issue with the identical drawing disclosure but with claims directed to different inventions. So any consideration of possible double patenting rejections between a utility application or patent with a design application cannot be based on the utility drawing disclosure alone. *Anchor Hocking Corp. v. Eyelet Specialty Co.*, 377 F. Supp. 98, 183 USPQ 87 (D. Del. 1974). The examiner must be able to recreate the design claimed from the utility claims without any reliance whatsoever on the drawings.

If a provisional double patenting rejection (of any type) is the only rejection remaining in two conflicting applications, the examiner should withdraw that rejection in one of the applications (e.g., the application with the earlier filing date) and permit the application to issue as a patent. The examiner should maintain the provisional double patenting rejection in the other application which rejection will be converted into a double patenting rejection when the first application issues as a patent. If more than two applications conflict with each other and one is allowed, the remaining applications should be cross rejected against the others as well as the allowed application. For this type of rejection to be appropriate, there must be either at least one inventor in common, or a common assignee. If the claims in copending design applications or a design patent and design applications have a common assignee but different inventive entities, rejections under 35 U.S.C. 102(e), (f) and (g)/103(a) must be considered in addition to the double patenting rejection. See MPEP § 804, § 2136, § 2137 and § 2138.

I. “SAME INVENTION” DOUBLE PATENTING REJECTIONS

A design - design statutory double patenting rejection based on 35 U.S.C. 171 prevents the issuance of a second patent for a design already patented. For this type of double patenting rejection to be proper, identical designs with identical scope must be twice claimed. *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). A design - utility “same inven-

tion” double patenting rejection is based on judicial doctrine as there is no statutory basis for this rejection because neither 35 U.S.C. 101 nor 35 U.S.C. 171 can be applied against both claims. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). The “same invention” type of double patenting rejection, whether statutory or nonstatutory, cannot be overcome by a terminal disclaimer. *In re Swett*, 145 F.2d 631, 172 USPQ 72 (CCPA 1971).

¶ 15.23.02 Summary for “Same Invention” – Type Double Patenting Rejections

Applicant is advised that a terminal disclaimer may not be used to overcome a “same invention” type double patenting rejection. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); MPEP § 804.02.

Examiner Note:

This form paragraph should follow all “same invention” type double patenting rejections.

¶ 15.23 35 U.S.C. 171 Double Patenting Rejection (Design-Design)

The claim is rejected under 35 U.S.C. 171 on the ground of double patenting since it is claiming the same design as that claimed in United States Design Patent No. [1].

Examiner Note:

Form paragraph 15.23.02 should follow all “same invention” type double patenting rejections.

¶ 15.23.01 35 U.S.C. 171 Provisional Double Patenting Rejection (Design-Design)

The claim is provisionally rejected under 35 U.S.C. 171 on the ground of double patenting since it is claiming the same design as that claimed in copending Application No. [1]. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Examiner Note:

Form paragraph 15.23.02 should follow all “same invention” type double patenting rejections.

¶ 15.24.07 Double Patenting Rejection (Design-Utility)

The claim is rejected under the judicially created doctrine of double patenting as being directed to the same invention as that set forth in claim [1] of United States Patent No. [2]. See *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Examiner Note:

Form paragraph 15.23.02 should follow all “same invention” type double patenting rejections.

¶ 15.24.08 Provisional Double Patenting Rejection (Design-Utility)

The claim is provisionally rejected under the judicially created doctrine of double patenting as being directed to the same inven-

tion as that set forth in claim [1] of copending Application No. [2]. See *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

This is a provisional double patenting rejection because the claims have not in fact been patented.

Examiner Note:

Form paragraph 15.23.02 should follow all “same invention” type double patenting rejections.

II. NONSTATUTORY DOUBLE PATENTING REJECTIONS

A rejection based on nonstatutory double patenting is based on a judicially created doctrine grounded in public policy so as to prevent the unjustified or improper timewise extension of the right to exclude granted by a patent. *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993).

A nonstatutory double patenting rejection of the obviousness-type applies to claims directed to the *same inventive concept with different appearances or differing scope which are patentably indistinct from each other*. Nonstatutory categories of double patenting rejections which are not the “same invention” type may be overcome by the submission of a terminal disclaimer.

****>**In determining whether an obviousness-type double patenting rejection is appropriate, the examiner must compare the overall appearance of the claimed design in the application with the overall appearance of the claimed design in the conflicting application or patent. The claim in the patent or conflicting application must be considered as a whole, i.e., the elements of the claimed design of the reference are not considered individually as they may be when establishing a *prima facie* case of obviousness under 35 U.S.C. 103(a). After the factual inquiries mandated under *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), have been made, as with a rejection under 35 U.S.C. 103(a), the examiner must then determine whether the results of the inquiries support a conclusion of *prima facie* obviousness-type double patenting. To establish a *prima facie* case of obviousness-type double patenting: (A) the conflicting design claims must have overall appearances with basically the same design characteristics; and (B) the differences between the two designs must be insufficient to patentably distinguish one design from the other. Differences may be considered patentably

insufficient when they are *de minimis* or obvious to a designer of ordinary skill in the art. While the conflicting application or patent (if less than a year older than the application) used to establish a *prima facie* case of obviousness-type double patenting is not considered “prior art,”[<] the principle involved is the same. *In re Zickendraht*, 319 F.2d 225, 138 USPQ 22 (CCPA 1963)(see concurring opinion of Judge Rich).

In determining whether to make an obviousness-type double patenting rejection between designs having differing scope, the examiner should compare the reference claim with the application claim. A rejection is appropriate if:

(A) The difference in scope is minor and patentably indistinct between the claims being compared;

(B) Patent protection for the design, fully disclosed in and covered by the claim of the reference, would be extended by the allowance of the claim in the later filed application; and

(C) No terminal disclaimer has been filed.

This kind of obviousness-type double patenting rejection in designs will occur between designs which may be characterized as a combination (narrow claim) and a subcombination/element thereof (broad claim). See discussion in MPEP § 1504.05, subsection II, B. If the designs are patentably indistinct and are directed to the same inventive concept the examiner must determine whether the subject matter of the narrower claim is fully disclosed in and covered by the broader claim of the reference. If the reference does *not* fully disclose the narrower claim, then a double patenting rejection should not be made. The additional disclosure necessary to establish that the applicant was in possession of the narrower claim at the time the broader claim was filed may be in a title or ***>*descriptive statement[<] as well as in a broken line showing in the drawings. If the broader claim of the reference does not disclose the additional subject matter claimed in the narrower claim, then applicant could not have claimed the narrower claim at the time the application with the broader claim was filed and a rejection under nonstatutory double patenting would be inappropriate.

A nonstatutory double patenting rejection may be made between a patent and an application or provisionally between applications. Such rejection over a patent should only be given if the patent issued less

than a year before the filing date of the application. If the patent is more than a year older than the application, the patent is considered to be “prior art” which may be applied in a rejection under 35 U.S.C. 102(b)/103(a). The purpose of a terminal disclaimer is to obviate a double patenting rejection by removing potential harm to the public by issuing a second patent. See MPEP § 804.

If the issue of double patenting is raised between a patent and a *continuing* application, examiners are reminded that this ground of rejection can only be made when the filing of the continuing application is voluntary and not the direct, unmodified result of restriction requirement under 35 U.S.C. 121. See MPEP § 804.01.

Examiners should particularly note that a design-design nonstatutory double patenting rejection does not *always* have to be made in both of the conflicting applications. For the most part, these rejections will be made in each of the conflicting applications; but, if the rejection is only appropriate in one direction, it is proper to reject only one application. The criteria for determining whether a one-way obviousness determination is necessary or a two-way obviousness determination is necessary is set forth in MPEP § 804. However, in design-utility situations, a two-way obviousness determination is necessary for the rejection to be proper. *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999).

The following form paragraphs may be used in making a double patenting rejection. Explanation should be provided in the appropriate brackets.

¶ 15.24.06 *Basis for Nonstatutory Double Patenting, “Heading Only”*

The non-statutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Examiner Note:

This form paragraph must precede all nonstatutory double patenting rejections as a heading, except “same invention” type.

¶ 15.24 Obviousness-type Double Patenting Rejection (Single Reference)

The claim is rejected under the judicially created doctrine of the obviousness-type double patenting of the claim in United States Patent No. [1]. Although the conflicting claims are not identical, they are not patentably distinct from each other because [2].

Examiner Note:

1. In bracket 1, insert prior U.S. Patent Number.
2. In bracket 2, the differences between the conflicting claims must be identified and indicated as being minor and not distinguishing the overall appearance of one over the other.
3. This form paragraph must be preceded by form paragraph 15.24.06 and followed by form paragraph 15.67.

¶ 15.24.03 Provisional Obviousness-Type Double Patenting Rejection (Single Reference)

The claim is provisionally rejected under the judicially created doctrine of the obviousness-type double patenting of the claim of copending Application No. [1]. Although the conflicting claims are not identical, they are not patentably distinct from each other because [2]. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Examiner Note:

1. In bracket 1, insert conflicting application number.
2. In bracket 2, the differences between the conflicting claims must be identified and indicated as being minor and not distinguishing the overall appearance of one over the other.
3. This form paragraph must be preceded by form paragraph 15.24.06 and followed by form paragraph 15.67.

¶ 15.67 Rationale for 35 U.S.C. 103(a) Rejection (Single Reference)

It is well settled that it is unobviousness in the overall appearance of the claimed design, when compared with the prior art, rather than minute details or small variations in design as appears to be the case here, that constitutes the test of design patentability. See *In re Frick*, 275 F.2d 741, 125 USPQ 191 (CCPA 1960) and *In re Lamb*, 286 F.2d 610, 128 USPQ 539 (CCPA 1961).

¶ 15.25 Obviousness-Type Double Patenting Rejection (Multiple References)

The claim is rejected under the judicially created doctrine of the obviousness-type double patenting of the claim(s) in United States Patent No. [1] in view of [2]. At the time applicant made the design, it would have been obvious to a designer of ordinary skill in the art to [3] as demonstrated by [4].

Examiner Note:

1. In bracket 1, insert conflicting patent number.
2. In bracket 2, insert secondary reference(s).
3. In bracket 3, insert an explanation of how the conflicting claim in the patent is modified.
4. In bracket 4, identify the secondary reference(s) teaching the modification(s).
5. This form paragraph must be preceded by form paragraph 15.24.06 and followed by form paragraph 15.68.

¶ 15.24.04 Provisional Obviousness-Type Double Patenting Rejection (Multiple References)

The claim is provisionally rejected under the judicially created doctrine of the obviousness-type double patenting of the claim of copending Application No. [1] in view of [2]. At the time applicant made the design, it would have been obvious to a designer of ordinary skill in the art to [3] as demonstrated by [4]. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Examiner Note:

1. In bracket 1, insert conflicting application number.
2. In bracket 2, insert secondary reference(s).
3. In bracket 3, insert an explanation of how the conflicting claim in the copending application is modified.
4. In bracket 4, identify the secondary reference(s) teaching the modification(s).
5. This form paragraph must be preceded by form paragraph 15.24.06 and followed by form paragraph 15.68.

¶ 15.68 Rationale for 35 U.S.C. 103(a) Rejection (Multiple References)

This modification of the basic reference in light of the secondary prior art is proper because the applied references are so related that the appearance of features shown in one would suggest the application of those features to the other. See *In re Rosen*, 673 F.2d 388, 213 USPQ 347 (CCPA 1982); *In re Carter*, 673 F.2d 1378, 213 USPQ 625 (CCPA 1982), and *In re Glavas*, 230 F.2d 447, 109 USPQ 50 (CCPA 1956). Further, it is noted that case law has held that a designer skilled in the art is charged with knowledge of the related art; therefore, the combination of old elements, herein, would have been well within the level of ordinary skill. See *In re Antle*, 444 F.2d 1168, 170 USPQ 285 (CCPA 1971) and *In re Nalbandian*, 661 F.2d 1214, 211 USPQ 782 (CCPA 1981).

1504.10 Priority Under 35 U.S.C. 119(a)-(d) [R-5]

35 U.S.C. 172. Right of priority.

The right of priority provided for by subsections (a) through (d) of section 119 of this title and the time specified in section 102(d) shall be six months in the case of designs. The right of priority provided for by section 119(e) of this title shall not apply to designs.

The provisions of 35 U.S.C. 119(a)-(d) apply to design patent applications. However, in order to

ing expert testimony with respect to post-critical date clinical trials to show inherency); see also *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1320, 69 USPQ2d 1584, 1590 (Fed. Cir. 2004) (“[T]he fact that a characteristic is a necessary feature or result of a prior-art embodiment (that is itself sufficiently described and enabled) is enough for inherent anticipation, even if that fact was unknown at the time of the prior invention.”); *Abbott Labs v. Geneva Pharms., Inc.*, 182 F.3d 1315, 1319, 51 USPQ2d 1307, 1310 (Fed.Cir.1999) (“If a product that is offered for sale inherently possesses each of the limitations of the claims, then the invention is on sale, whether or not the parties to the transaction recognize that the product possesses the claimed characteristics.”); *Atlas Powder Co. v. Ireco, Inc.*, 190 F.3d 1342, 1348-49 (Fed. Cir. 1999) (“Because ‘sufficient aeration’ was inherent in the prior art, it is irrelevant that the prior art did not recognize the key aspect of [the] invention.... An inherent structure, composition, or function is not necessarily known.”); *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343-44, 74 USPQ2d 1398, 1406-07 (Fed. Cir. 2005) (holding that a prior art patent to an anhydrous form of a compound “inherently” anticipated the claimed hemihydrate form of the compound because practicing the process in the prior art to manufacture the anhydrous compound “inherently results in at least trace amounts of” the claimed hemihydrate even if the prior art did not discuss or recognize the hemihydrate).<

III. A REJECTION UNDER 35 U.S.C. 102/103 CAN BE MADE WHEN THE PRIOR ART PRODUCT SEEMS TO BE IDENTICAL EXCEPT THAT THE PRIOR ART IS SILENT AS TO AN INHERENT CHARACTERISTIC

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. “There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102.” *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply

to product, apparatus, and process claims claimed in terms of function, property or characteristic. Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims.

IV. EXAMINER MUST PROVIDE RATIONALE OR EVIDENCE TENDING TO SHOW INHERENCY

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’ ” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) (The claims were drawn to a disposable diaper having three fastening elements. The reference disclosed two fastening elements that could perform the same function as the three fastening elements in the claims. The court construed the claims to require three separate elements and held that the reference did not disclose a separate third fastening element, either expressly or inherently.). >Also, “[a]n invitation to investigate is not an inherent disclosure” where a prior art reference “discloses no more than a broad genus of potential applications of its discoveries.” *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1367, 71 USPQ2d 1081, 1091 (Fed. Cir. 2004) (explaining that “[a] prior art reference that discloses a genus still does not inherently disclose all species within that broad category” but must be examined to see if a disclosure of the claimed species has been made or whether the prior art reference merely invites further experimentation to find the species.<

“In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) (Applicant’s invention was directed to a biaxially oriented, flexible dilation catheter balloon (a tube which expands upon inflation) used, for example, in clearing the blood vessels of heart patients). The examiner applied a U.S. patent to Schjeldahl which disclosed injection molding a tubular preform and then injecting air into the preform to expand it against a mold (blow molding). The reference did not directly state that the end product balloon was biaxially oriented. It did disclose that the balloon was “formed from a thin flexible inelastic, high tensile strength, biaxially oriented synthetic plastic material.” *Id.* at 1462 (emphasis in original). The examiner argued that Schjeldahl’s balloon was inherently biaxially oriented. The Board reversed on the basis that the examiner did not provide objective evidence or cogent technical reasoning to support the conclusion of inherency.).

In *In re Schreiber*, 128 F.3d 1473, 44 USPQ2d 1429 (Fed. Cir. 1997), the court affirmed a finding that a prior patent to a conical spout used primarily to dispense oil from an oil can inherently performed the functions recited in applicant’s claim to a conical container top for dispensing popped popcorn. The examiner had asserted inherency based on the structural similarity between the patented spout and applicant’s disclosed top, i.e., both structures had the same general shape. The court stated:

[N]othing in Schreiber’s [applicant’s] claim suggests that Schreiber’s container is of a ‘different shape’ than Harz’s [patent]. In fact, [] an embodiment according to Harz (Fig. 5) and the embodiment depicted in Fig. 1 of Schreiber’s application have the same general shape. For that reason, the examiner was justified in concluding that the opening of a conically shaped top as disclosed by Harz is inherently of a size sufficient to ‘allow [] several kernels of popped popcorn to pass through at the same time’ and that the taper of Harz’s conically shaped top is inherently of such a shape ‘as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted to the container.’ The examiner therefore correctly found that Harz established a *prima facie* case of anticipation.

In re Schreiber, 128 F.3d at 1478, 44 USPQ2d at 1432.

V. ONCE A REFERENCE TEACHING PRODUCT APPEARING TO BE SUBSTANTIALLY IDENTICAL IS MADE THE BASIS OF A REJECTION, AND THE EXAMINER PRESENTS EVIDENCE OR REASONING TENDING TO SHOW INHERENCY, THE BURDEN SHIFTS TO THE APPLICANT TO SHOW AN UNOBVIOUS DIFFERENCE

“[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on ‘inherency’ under 35 U.S.C. 102, on ‘*prima facie* obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

In *In re Fitzgerald*, the claims were directed to a self-locking screw-threaded fastener comprising a metallic threaded fastener having patches of crystallizable thermoplastic bonded thereto. The claim further specified that the thermoplastic had a reduced degree of crystallization shrinkage. The specification disclosed that the locking fastener was made by heating the metal fastener to melt a thermoplastic blank which is pressed against the metal. After the thermoplastic adheres to the metal fastener, the end product is cooled by quenching in water. The examiner made a rejection based on a U.S. patent to Barnes. Barnes taught a self-locking fastener in which the patch of thermoplastic was made by depositing thermoplastic powder on a metallic fastener which was then heated. The end product was cooled in ambient air, by cooling air or by contacting the fastener with a water trough. The court first noted that the two fasteners were identical or only slightly different from each other. “Both fasteners possess the same utility, employ the same crystallizable polymer (nylon 11), and have an adherent plastic patch formed by melting and then cooling the polymer.” *Id.* at 596 n.1, 619 F.2d at 70 n.1. The court then noted that the Board had found that Barnes’

another as “prior art” is an admission **>which can be relied upon for both anticipation and obviousness determinations, regardless of whether the admitted prior art would otherwise qualify as prior art under the statutory categories of 35 U.S.C. 102. *Riverwood Int’l Corp. v. R.A. Jones & Co.*, 324 F.3d 1346, 1354, 66 USPQ2d 1331, 1337 (Fed. Cir. 2003); *Constant v. Advanced Micro-Devices Inc.*, 848 F.2d 1560, 1570, 7 USPQ2d 1057, 1063 (Fed. Cir. 1988).< However, even if labeled as “prior art,” the work of the same inventive entity may not be considered prior art against the claims unless it falls under one of the statutory categories. *Id.*; see also *Reading & Bates Construction Co. v. Baker Energy Resources Corp.*, 748 F.2d 645, 650, 223 USPQ 1168, 1172 (Fed. Cir. 1984) (“[W]here the inventor continues to improve upon his own work product, his foundational work product should not, without a statutory basis, be treated as prior art solely because he admits knowledge of his own work. It is common sense that an inventor, regardless of an admission, has knowledge of his own work.”).

Consequently, the examiner must determine whether the subject matter identified as “prior art” is applicant’s own work, or the work of another. In the absence of another credible explanation, examiners should treat such subject matter as the work of another.

II. DISCUSSION OF PRIOR ART IN SPECIFICATION

Where the specification identifies work done by another as “prior art,” the subject matter so identified is treated as admitted prior art. *In re Nomiya*, 509 F.2d 566, 571, 184 USPQ 607, 611 (CCPA 1975) (holding applicant’s labeling of two figures in the application drawings as “prior art” to be an admission that what was pictured was prior art relative to applicant’s improvement).

III. JEPSON CLAIMS

Drafting a claim in *Jepson* format (i.e., the format described in 37 CFR 1.75(e); see MPEP § 608.01(m)) is taken as an implied admission that the subject matter

of the preamble is the prior art work of another. *In re Fout*, 675 F.2d 297, 301, 213 USPQ 532, 534 (CCPA 1982) (holding preamble of *Jepson*-type claim to be admitted prior art where applicant’s specification credited another as the inventor of the subject matter of the preamble). However, this implication may be overcome where applicant gives another credible reason for drafting the claim in *Jepson* format. *In re Ehrreich*, 590 F.2d 902, 909-910, 200 USPQ 504, 510 (CCPA 1979) (holding preamble not to be admitted prior art where applicant explained that the *Jepson* format was used to avoid a double patenting rejection in a co-pending application and the examiner cited no art showing the subject matter of the preamble). Moreover, where the preamble of a *Jepson* claim describes applicant’s own work, such may not be used against the claims. *Reading & Bates Construction Co. v. Baker Energy Resources Corp.*, 748 F.2d 645, 650, 223 USPQ 1168, 1172 (Fed. Cir. 1984); *Ehrreich*, 590 F.2d at 909-910, 200 USPQ at 510.

IV. INFORMATION DISCLOSURE STATEMENT (IDS)

Mere listing of a reference in an information disclosure statement is not taken as an admission that the reference is prior art against the claims. *Riverwood Int’l Corp. v. R.A. Jones & Co.*, 324 F.3d 1346, 1354-55, 66 USPQ2d 1331, 1337-38 (Fed. Cir. 2003) (listing of applicant’s own prior patent in an IDS does not make it available as prior art absent a statutory basis); see also 37 CFR 1.97(h) (“The filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b).”).

2131 Anticipation — Application of 35 U.S.C. 102(a), (b), and (e) [R-1]

35 U.S.C. 102. Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

**>

(e) the invention was described in — (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language; or<

(f) he did not himself invent the subject matter sought to be patented, or

(g)(1)during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer

clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in "at least one of two-digit, three-digit, or four-digit" representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02.< "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Note that, in some circumstances, it is permissible to use multiple references in a 35 U.S.C. 102 rejection. See MPEP § 2131.01.

2131.01 Multiple Reference 35 U.S.C. 102 Rejections

Normally, only one reference should be used in making a rejection under 35 U.S.C. 102. However, a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to:

(A) Prove the primary reference contains an "enabled disclosure;"

(B) Explain the meaning of a term used in the primary reference; or

(C) Show that a characteristic not disclosed in the reference is inherent.

See paragraphs I-III below for more explanation of each circumstance.

I. TO PROVE REFERENCE CONTAINS AN "ENABLED DISCLOSURE"

Extra References and Extrinsic Evidence Can Be Used To Show the Primary Reference Contains an "Enabled Disclosure"

When the claimed composition or machine is disclosed identically by the reference, an additional reference may be relied on to show that the primary reference has an "enabled disclosure." *In re Samour*, 571 F.2d 559, 197 USPQ 1 (CCPA 1978) and *In re Donohue*, 766 F.2d 531, 226 USPQ 619 (Fed. Cir. 1985) (Compound claims were rejected under 35 U.S.C. 102(b) over a publication in view of two

claim language, see MPEP § 2111, and considering both the invention and the prior art as a whole. See MPEP § 2141.02.

C. Resolving the Level of Ordinary Skill in the Art

Any obviousness rejection should include, either explicitly or implicitly in view of the prior art applied, an indication of the level of ordinary skill. A finding as to the level of ordinary skill may be used as a partial basis for a resolution of the issue of obviousness.

The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. Factors that may be considered in determining the level of ordinary skill in the art may include: (1) “type of problems encountered in the art;” (2) “prior art solutions to those problems;” (3) “rapidity with which innovations are made;” (4) “sophistication of the technology; and” (5) “educational level of active workers in the field. In a given case, every factor may not be present, and one or more factors may predominate.” *In re GPAC*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995); *Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986); *Environmental Designs, Ltd. V. Union Oil Co.*, 713 F.2d 693, 696, 218 USPQ 865, 868 (Fed. Cir. 1983).

“A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. at ___, 82 USPQ2d at 1397. “[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* Office personnel may also take into account “the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at ___, 82 USPQ2d at 1396.

In addition to the factors above, Office personnel may rely on their own technical expertise to describe the knowledge and skills of a person of ordinary skill in the art. The Federal Circuit has stated that examiners and administrative patent judges on the Board are “persons of scientific competence in the fields in which they work” and that their findings are “informed by their scientific knowledge, as to the meaning of prior art references to persons of ordinary skill in the art.” *In re Berg*, 320 F.3d 1310, 1315, 65 USPQ2d 2003, 2007 (Fed. Cir. 2003).

III. RATIONALES TO SUPPORT REJECTIONS UNDER 35 U.S.C. 103

Once the *Graham* factual inquiries are resolved, Office personnel must determine whether the claimed invention would have been obvious to one of ordinary skill in the art.

The obviousness analysis cannot be confined by . . . overemphasis on the importance of published articles and the explicit content of issued patents. . . . In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396.

Prior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art. The prior art reference (or references when combined) need not teach or suggest all the claim limitations, however, Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. The “mere existence of differences between the prior art and an invention does not establish the invention’s nonobviousness.” *Dann v. Johnston*, 425 U.S. 219, 230, 189 USPQ 257, 261 (1976). The gap between the prior art and the claimed invention may not be “so great as to render the [claim] nonobvious to one reasonably skilled in the art.” *Id.* In determining obviousness, neither the particular motivation to make the claimed invention nor the problem the inventor is solving controls. The proper analysis is whether the claimed invention would have been obvious to one of ordinary skill in the art after consideration of all the facts. See 35 U.S.C. 103(a). Factors other than the disclosures of the cited prior art may provide a basis for concluding that it would have been obvious to one of ordinary skill in the art to bridge the gap. The rationales discussed below outline reasoning that may be applied to find obviousness in such cases.

If the search of the prior art and the resolution of the *Graham* factual inquiries reveal that an obviousness rejection may be made using the familiar teaching-suggestion-motivation (TSM) rationale, then such a rejection should be made. Although the Supreme Court in *KSR* cautioned against an overly rigid application of TSM, it also recognized that TSM was one of a number of valid rationales that could be used to determine obviousness. (According to the Supreme

Court, establishment of the TSM approach to the question of obviousness “captured a helpful insight.” 550 U.S. at ___, 82 USPQ2d at 1396 (citing *In re Bergel*, 292 F.2d 955, 956-57, 130 USPQ 206, 207-208 (1961)). Furthermore, the Court explained that “[t]here is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis.” 550 U.S. at ___, 82 USPQ2d at 1396. The Supreme Court also commented that the Federal Circuit “no doubt has applied the test in accord with these principles [set forth in *KSR*] in many cases.” 550 U.S. at ___, 82 USPQ2d at 1396. Office personnel should also consider whether one or more of the other rationales set forth below support a conclusion of obviousness. The Court in *KSR* identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham*. *KSR*, 550 U.S. at ___, 82 USPQ2d at 1395-97. Note that the list of rationales provided below is not intended to be an all-inclusive list. Other rationales to support a conclusion of obviousness may be relied upon by Office personnel.

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396. Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

See MPEP § 2143 for a discussion of the rationales listed above along with examples illustrating how the cited rationales may be used to support a finding of obviousness. See also MPEP § 2144 - § 2144.09 for additional guidance regarding support for obviousness determinations.

IV. APPLICANT’S REPLY

Once Office personnel have established the *Graham* factual findings and concluded that the claimed invention would have been obvious, the burden then shifts to the applicant to (A) show that the Office erred in these findings or (B) provide other evidence to show that the claimed subject matter would have been nonobvious. 37 CFR 1.111(b) requires applicant to distinctly and specifically point out the supposed errors in the Office’s action and reply to every ground of objection and rejection in the Office action. The reply must present arguments pointing out the specific distinction believed to render the claims patentable over any applied references.

If an applicant disagrees with any factual findings by the Office, an effective traverse of a rejection based wholly or partially on such findings must include a reasoned statement explaining why the applicant believes the Office has erred substantively as to the factual findings. A mere statement or argument that the Office has not established a *prima facie* case of obviousness or that the Office’s reliance on common knowledge is unsupported by documentary evidence will not be considered substantively adequate to rebut the rejection or an effective traverse of the rejection under 37 CFR 1.111(b). Office personnel addressing this situation may repeat the rejection

766 (Fed. Cir. 1985) (Claims at issue were directed to an instrument marker pen body, the improvement comprising a pen arm holding means having an integrally molded hinged member for folding over against the pen body. Although the patent owners argued the hinge and fastener art was nonanalogous, the court held that the problem confronting the inventor was the need for a simple holding means to enable frequent, secure attachment and easy removal of a marker pen to and from a pen arm, and one skilled in the pen art trying to solve that problem would have looked to the fastener and hinge art.); and *Ex parte Goodyear Tire & Rubber Co.*, 230 USPQ 357 (Bd. Pat. App. & Inter. 1985) (A reference in the clutch art was held reasonably pertinent to the friction problem faced by applicant, whose claims were directed to a braking material, because brakes and clutches utilize interfacing materials to accomplish their respective purposes.).

V. ANALOGY IN THE ELECTRICAL ARTS

See, for example, ** *Medtronic, Inc. v. Cardiac Pacemakers*, 721 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983) (Patent claims were drawn to a cardiac pacemaker which comprised, among other components, a runaway inhibitor means for preventing a pacemaker malfunction from causing pulses to be applied at too high a frequency rate. Two references disclosed circuits used in high power, high frequency devices which inhibited the runaway of pulses from a pulse source. The court held that one of ordinary skill in the pacemaker designer art faced with a rate-limiting problem would look to the solutions of others faced with rate limiting problems, and therefore the references were in an analogous art.).

VI. EXAMPLES OF ANALOGY IN THE DESIGN ARTS

See MPEP § 1504.03 for a discussion of the relevant case law setting forth the general requirements for analogous art in design applications.

For examples of analogy in the design arts, see *In re Rosen*, 673 F.2d 388, 213 USPQ 347 (CCPA 1982) (The design at issue was a coffee table of contemporary styling. The court held designs of contemporary furniture other than coffee tables, such as the desk and circular glass table top designs of the references relied upon, would reasonably fall within the scope of the

knowledge of the designer of ordinary skill.); *Ex parte Pappas*, 23 USPQ2d 1636 (Bd. Pat. App. & Inter. 1992) (At issue was an ornamental design for a feed bunk with an inclined corner configuration. Examiner relied upon references to a bunk lacking the inclined corners claimed by appellant and the *Architectural Precast Concrete Drafting Handbook*. The Board found the *Architectural Precast Concrete Drafting Handbook* was analogous art, noting that a bunk may be a wood or concrete trough, and that both references relied upon “disclose structures in which at least one upstanding leg is generally perpendicular to a base portion to define a corner configuration between the leg and base portion.”); *In re Butera*, 1 F.3d 1252, 28 USPQ2d 1399 (Fed. Cir. 1993) (unpublished - not citable as precedent) (The claimed invention, a spherical design for a combined insect repellent and air freshener, was rejected by the Board as obvious over a single reference to a design for a metal ball anode. The court reversed, holding the reference design to be nonanalogous art. “A prior design is of the type claimed if it has the same general use as that claimed in the design patent application One designing a combined insect repellent and air freshener would therefore not have reason to know of or look to a design for a metal ball anode.” 28 USPQ2d at 1400.).

2141.02 Differences Between Prior Art and Claimed Invention [R-5]

Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language, and considering both the invention and the prior art references as a whole. See MPEP § 2111 - § 2116.01 for case law pertaining to claim interpretation.

I. THE CLAIMED INVENTION AS A WHOLE MUST BE CONSIDERED

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983) (Claims were directed to a vibratory testing machine (a hard-bearing wheel

balancer) comprising a holding structure, a base structure, and a supporting means which form “a single integral and gaplessly continuous piece.” *Nortron* argued the invention is just making integral what had been made in four bolted pieces, improperly limiting the focus to a structural difference from the prior art and failing to consider the invention as a whole. The prior art perceived a need for mechanisms to dampen resonance, whereas the inventor eliminated the need for dampening via the one-piece gapless support structure. “Because that insight was contrary to the understandings and expectations of the art, the structure effectuating it would not have been obvious to those skilled in the art.” 713 F.2d at 785, 218 USPQ at 700 (citations omitted.).

See also *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) (Claims were directed to a three step process for preparing sweetened foods and drinks. The first two steps were directed to a process of producing high purity maltose (the sweetener), and the third was directed to adding the maltose to foods and drinks. The parties agreed that the first two steps were unobvious but formed a known product and the third step was obvious. The Solicitor argued the preamble was directed to a process for preparing foods and drinks sweetened mildly and thus the specific method of making the high purity maltose (the first two steps in the claimed process) should not be given weight, analogizing with product-by-process claims. The court held “due to the admitted unobviousness of the first two steps of the claimed combination of steps, the subject matter as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.” 535 F.2d at 69, 190 USPQ at 17 (emphasis in original). The preamble only recited the purpose of the process and did not limit the body of the claim. Therefore, the claimed process was a three step process, not the product formed by two steps of the process or the third step of using that product.).

II. DISTILLING THE INVENTION DOWN TO A “GIST” OR “THRUST” OF AN INVENTION DISREGARDS “AS A WHOLE” REQUIREMENT

Distilling an invention down to the “gist” or “thrust” of an invention disregards the requirement of analyzing the subject matter “as a whole.” *W.L. Gore*

& Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (restricting consideration of the claims to a 10% per second rate of stretching of unsintered PTFE and disregarding other limitations resulted in treating claims as though they read differently than allowed); *Bausch & Lomb v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 447-49, 230 USPQ 416, 419-20 (Fed. Cir. 1986), *cert. denied*, 484 U.S. 823 (1987) (District court focused on the “concept of forming ridgeless depressions having smooth rounded edges using a laser beam to vaporize the material,” but “disregarded express limitations that the product be an ophthalmic lens formed of a transparent cross-linked polymer and that the laser marks be surrounded by a smooth surface of unsublimated polymer.”). See also *Jones v. Hardy*, 727 F.2d 1524, 1530, 220 USPQ 1021, 1026 (Fed. Cir. 1984) (“treating the advantage as the invention disregards statutory requirement that the invention be viewed ‘as a whole’”); *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1 USPQ2d 1593 (Fed. Cir.), *cert. denied*, 481 U.S. 1052 (1987) (district court improperly distilled claims down to a one word solution to a problem).

III. DISCOVERING SOURCE/CAUSE OF A PROBLEM IS PART OF “AS A WHOLE” INQUIRY

“[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the ‘subject matter as a whole’ which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103.” *In re Spinnoble*, 405 F.2d 578, 585, 160 USPQ 237, 243 (CCPA 1969). However, “discovery of the cause of a problem . . . does not always result in a patentable invention. . . . [A] different situation exists where the solution is obvious from prior art which contains the same solution for a similar problem.” *In re Wiseman*, 596 F.2d 1019, 1022, 201 USPQ 658, 661 (CCPA 1979) (emphasis in original).

In *In re Spinnoble*, the claim was directed to a plural compartment mixing vial wherein a center seal plug was placed between two compartments for temporarily isolating a liquid-containing compartment from a solids-containing compartment. The claim differed from the prior art in the selection of butyl rubber

ence describing a catheter including that means. The court agreed that the first reference, which stressed simplicity of structure and taught emulsification of the debris, did not teach away from the addition of a channel for the recovery of the debris.).

VI. THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

2143.02 Reasonable Expectation of Success Is Required [R-6]

>A rationale to support a conclusion that a claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395 (2007); *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); *Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

I. < OBVIOUSNESS REQUIRES ONLY A REASONABLE EXPECTATION OF SUCCESS

The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (Claims directed to a method of treating depression with amitriptyline (or nontoxic salts thereof) were rejected as *prima facie* obvious over prior art disclosures that amitriptyline is a compound known to possess psychotropic properties and that imipramine is a structurally similar psychotropic compound known to possess antidepressive properties, in view of prior art suggesting the aforementioned compounds would be expected to have similar activity because the structural difference between the compounds involves a known bioisosteric replacement and because a research paper comparing the pharmacological properties of these two compounds suggested clinical testing of amitriptyline as an antidepressant. The court sustained the rejection, finding that the teachings of the prior art provide a sufficient basis for a reasonable expectation of success.); *Ex parte Blanc*, 13 USPQ2d 1383 (Bd. Pat. App. & Inter. 1989) (Claims were directed to a process of sterilizing a polyolefinic composition with high-energy radiation in the presence of a phenolic polyester antioxidant to inhibit discoloration or degradation of the polyolefin. Appellant argued that it is unpredictable whether a particular antioxidant will solve the problem of discoloration or degradation. However, the Board found that because the prior art taught that appellant's preferred antioxidant is very efficient and provides better results compared with other prior art antioxidants, there would have been a reasonable expectation of success.).

>

II. < AT LEAST SOME DEGREE OF PREDICTABILITY IS REQUIRED; APPLICANTS MAY PRESENT EVIDENCE SHOWING THERE WAS NO REASONABLE EXPECTATION OF SUCCESS

Obviousness does not require absolute predictability, however, at least some degree of predictability is required. Evidence showing there was no reasonable expectation of success may support a conclusion of

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169 F.3d 743
49 U.S.P.Q.2d 1949
In re Anthony J. ROBERTSON and Charles L. Scripps.
No. 98-1270.
United States Court of Appeals,
Federal Circuit.
Feb. 25, 1999.

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Kenneth R. Adamo, Jones, Day, Reavis & Pogue, of Cleveland, Ohio, argued for appellant. With him on the brief were Calvin P. Griffith, and Gregory A. Castanias, of Washington, DC. Of counsel on the brief was Steven W. Miller, The Proctor & Gamble Company, of Cincinnati, Ohio.

Linda Moncys Isacson, Associate Solicitor, Office of the Solicitor, of Arlington, Virginia, argued for appellee. With her on the brief were Albin F. Drost, Acting Solicitor, and John M. Whealan, Associate Solicitor.

Before NEWMAN, Circuit Judge, FRIEDMAN, Senior Circuit Judge, and RADER, Circuit Judge.

Opinion for the court filed by Senior Circuit Judge FRIEDMAN, in which Circuit Judge PAULINE NEWMAN joins. Concurring opinion filed by Circuit Judge RADER.

FRIEDMAN, Senior Circuit Judge:

This appeal challenges the decision of the Board of Patent Appeals and Interferences (Board) that claim 76 in the appellants' patent application was anticipated by and obvious over United States Patent No. 4,895,569 (the Wilson patent). We reverse.

I

Both claim 76 and Wilson involve fastening and disposal systems for diapers. In both, the body of the diaper features a small front and a larger rear section. The outer edges of those sections are attached at the wearer's waist in the hip area. Once the diaper is soiled and then removed, the smaller front section is rolled up into the larger rear section and secured in this rolled-up configuration by fasteners.

The appellants' application is for "an improved mechanical fastening system for ... disposable absorbent articles [i.e., diapers] that provides convenient disposal of the absorbent article." Claim 76 covers:

[A] mechanical fastening system for forming side closures ... comprising

a closure member ... comprising a first mechanical fastening means for forming a closure, said first mechanical fastening means comprising a first fastening element;

a landing member ... comprising a second mechanical fastening means for forming a closure with said first mechanical fastening means, said second mechanical fastening means comprising a second fastening element mechanically engageable with said first element; and

disposal means for allowing the absorbent article to be secured in a disposal configuration after use, said disposal means comprising a third mechanical fastening means for securing the absorbent article in the disposal configuration, said third mechanical fastening means comprising a third fastening element mechanically engageable with said first fastening element ...

Claim 76 thus provides for two mechanical fastening means to attach the diaper to the wearer and a third such means for securing the diaper for disposal.

The Wilson patent discloses two snap elements on fastening strips attached to the outer edges of the front and rear hip sections of the garment. The fastening strips may also include "secondary load-bearing closure means"--additional fasteners to secure the garment; they may be identical to the snaps.

Wilson also states:

[D]isposal of the soiled garment upon removal from the body is easily accomplished by folding the front panel ... inwardly and then fastening the rear pair of mating fastener members ... to one another, thus neatly bundling the garment into a closed compact package for disposal.

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In other words, Wilson does not provide a separate fastening means to be used in disposing of the diaper. Instead, it suggests that disposal of the used diaper may be "easily accomplished" by rolling it up and employing the same fasteners used to attach the diaper to the wearer to form "a closed compact package for disposal."

In holding that the invention claim 76 covers was anticipated by Wilson, the Board did not hold that Wilson set forth a third fastening means. Instead, it found that Wilson anticipated claim 76 "under principles of inherency." Applying the language of claim 76 to the operation of Wilson, it concluded that "an artisan would readily understand the disposable absorbent garment of Wilson ... as being inherently capable of [making the secondary load-bearing closure means] (third fastening element) mechanically engageable with [the other snap fasteners on the fastening strip] (first fastening element)"--i.e., using the secondary closure not with its mate, but with one of the primary snap fasteners. The Board summarily affirmed the examiner's alternative ruling that claim 76 would have been obvious in light of Wilson because "claim 76 lacks novelty."

II

Anticipation under 35 U.S.C. § 102(e) requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed.Cir.1987).

A. The Wilson patent does not expressly include a third fastening means for disposal of the diaper, as claim 76 requires. That means is separate from and in addition to the other mechanical fastening means and performs a different function than they do. Indeed, Wilson merely suggests that the diaper may be closed for disposal by using the same fastening means that are used for initially attaching the diaper to the body.

If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is "inherent" in its disclosure. To establish inherency, the extrinsic

evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed.Cir.1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269, 948 F.2d 1264, 20 U.S.P.Q.2d at 1749 (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A.1981)).

In finding anticipation by inherency, the Board ignored the foregoing critical principles. The Board made no attempt to show that the fastening mechanisms of Wilson that were used to attach the diaper to the wearer also "necessarily" disclosed the third separate fastening mechanism of claim 76 used to close the diaper for disposal, or that an artisan of ordinary skill would so recognize. It cited no extrinsic evidence so indicating.

Instead, the Board ruled that one of the fastening means for attaching the diaper to the wearer also could operate as a third fastening means to close the diaper for disposal and that Wilson therefore inherently contained all the elements of claim 76. In doing so, the Board failed to recognize that the third mechanical fastening means in claim 76, used to secure the diaper for disposal, was separate from and independent of the two other mechanical means used to attach the diaper to the person. The Board's theory that these two fastening devices in Wilson were capable of being intermingled to perform the same function as the third and first fastening elements in claim 76 is insufficient to show that the latter device was inherent in Wilson. Indeed, the Board's analysis rests upon the very kind of probability or possibility--the odd use of fasteners with other than their mates--that this court has pointed out is insufficient to establish inherency.

III

The Board's entire discussion of obviousness was as follows:

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The rejection of claim 76 under 35 USC § 103

We sustain the rejection of claim 76 under 35 USC § 103.

Above, we found that claim 76 lacks novelty. Lack of novelty is the ultimate of obviousness. See *In re Fracalossi*, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982). Thus, claim 76 is appropriately rejected under 35 USC § 103 as being unpatentable.

The "lack of novelty" upon which the Board based its conclusion of obviousness, however, was its finding of anticipation. Our rejection of that finding eliminates the sole basis of the Board's obviousness determination, which therefore cannot stand. See *In re Adams*, 53 C.C.P.A. 1433, 364 F.2d 473, 480, 150 U.S.P.Q. 646, 651 (1966).

In his brief the Commissioner argues:

Moreover, even if this court interprets claim 76 to require two separate fasteners to perform the closure and disposal functions, it would have been well within the knowledge of one of ordinary skill in the art to take Wilson's one fastener and make it into two separate fasteners. See [*In re*] *Graves*, 69 F.3d [1147,] 1152, 36 USPQ2d [1697,] 1701 [(Fed.Cir.1995)] (When evaluating a reference, it is appropriate to

consider the knowledge of a skilled artisan in combination with the teaching of the reference.). Accordingly, claim 76 would have been obvious to one of ordinary skill in the art, and the rejection should be affirmed by this Court.

That, of course, was not the ground on which the Board based its obviousness ruling. We decline to consider counsel's newly-minted theory as an alternative ground for upholding the agency's decision. See *In re Soni*, 54 F.3d 746, 751, 34 U.S.P.Q.2d 1684, 1688 (Fed.Cir.1995) (citing *In re DeBlauwe*, 736 F.2d 699, 705 n. 7, 222 U.S.P.Q. 191, 196 n. 7 (Fed.Cir.1984)). The Board's obviousness ruling cannot be sustained on the ground the Board gave.

CONCLUSION

The decision of the Board of Patent Appeals and Interferences affirming the examiner's rejection of claim 76 as anticipated by and obvious over the Wilson patent is

REVERSED.

RADER, Circuit Judge, concurring.

Robertson asserts that the prior art Wilson patent does not teach three elements of claim 76: a "third mechanical fastening means," a disposal means on the "outside surface" of the body portion, and end regions that are "in an overlapping configuration when worn." In reversing the Board, this court relies solely on the purported failure of Wilson to teach the third fastening means. Because I believe Wilson teaches such a means, but does not teach the other two limitations at issue, I concur.

In its analysis, this court assumes without discussion that the claimed "third mechanical fastening means" covers a separate third mechanical fastening means. This issue is key, for if the claim does not require a separate third fastening means, but instead allows the first fastening means to also serve as the third, then the prior art Wilson patent clearly teaches that element of the claim. For two reasons, this claim does not, to my eyes, require a separate third fastening means. First, the claim does not specifically recite a separate third fastening means. Second, because the claim is in means-plus-function form, this court consults the specification to identify structure. The specification explicitly teaches that the first and third fastening elements can be the same so long as they are complementary, as they are in Wilson. Accordingly, I agree with the Board that Wilson teaches the claimed "third fastening element."

Wilson does not, however, teach either of the other two claim limitations at issue. As to the disposal means on the "outside surface" of the body portion, Wilson's figs. 12 and 13a-d show the disposal means on the inside of the body portion. As to the end regions that are "in an overlapping configuration when worn," Wilson explicitly teaches that the end regions should abut, not overlap, when worn. To overcome these teachings, the Board relied on the following statement in Wilson: "Further, the fastener members

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need not be previously mounted on a separate strip as shown then bonded ... to the stretchable outer cover.... Multi-component snaps are available which may be applied directly to a stretchable outer cover material...." Col. 7, l. 65 to col. 8, l. 3. The Board opined that applying snaps directly to the outer cover would result in both a disposal means on the "outside surface" and end regions "in an overlapping configuration when worn." Simply put, the Board has put more weight on this teaching than it can bear. It is far from clear what effect applying the snaps directly to the outer cover will have on the Wilson diaper

configuration, let alone that it will result in a configuration satisfying the claim elements at issue. Accordingly, because I believe that the Board clearly erred in this interpretation of Wilson, I would reverse on this ground.

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814 F.2d 628
2 U.S.P.Q.2d 1051
VERDEGAAL BROTHERS, INC., William Verdegaal, George
Verdegaal, Appellees,
v.
UNION OIL COMPANY OF CALIFORNIA, Brea Agricultural Services,
Inc., Appellants.
Appeal No. 86-1258.
United States Court of Appeals,
Federal Circuit.
March 12, 1987.

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Andrew J. Belansky, Christie, Parker & Hale, Pasadena, Cal., argued for appellants.

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With him on the brief was David A. Dillard.

John P. Sutton, Limbach, Limbach & Sutton, San Francisco, Cal., argued for appellees. With him on the brief was Michael E. Dergosits.

Before MARKEY, Chief Judge, and DAVIS and NIES, Circuit Judges.

NIES, Circuit Judge.

Union Oil Company of California and Brea Agricultural Services, Inc. (collectively Union Oil) appeal from a judgment of the United States District Court for the Eastern District of California, No. CV-F-83-68 REC, entered on a jury verdict which declared U.S. Patent No. 4,310,343 ('343), owned by Verdegaal Brothers, Inc., "valid" and claims 1, 2, and 4 thereof infringed by Union Oil. Union Oil's motion for judgment notwithstanding the verdict (JNOV) was denied. We reverse.

I

BACKGROUND

The General Technology

The patent in suit relates to a process for making certain known urea-sulfuric acid liquid fertilizer products. These products are made by reacting water, urea (a nitrogen-containing chemical), and sulfuric acid (a sulfur-containing chemical) in particular proportions. The nomenclature commonly used by the fertilizer industry refers to these fertilizer products numerically according to the percentages by weight of four fertilizer constituents in the following order: nitrogen, phosphorous, potassium, and sulfur. Thus, for example, a fertilizer containing 28% nitrogen, no phosphorous or potassium, and 9% sulfur is expressed numerically as 28-0-0-9.

The Process of the '343 Patent

The process disclosed in the '343 patent involves the chemical reaction between urea and sulfuric acid, which is referred to as an exothermic reaction because it gives off heat. To prevent high temperature buildup, the reaction is conducted in the presence of a nonreactive, nutritive heat sink which will absorb the heat of reaction. Specifically, a previously-made batch of liquid fertilizer--known as a "heel"--can serve as the heat sink to which more reactants are added. Claims 1 and 2 are representative:

1. In a process for making a concentrated liquid fertilizer by reacting sulfuric acid and urea, to form an end product, the improvement comprising:
 - a. providing a non-reactive, nutritive heat sink, capable of dissipating the heat of urea and sulfuric acid, in an amount at least 5% of the end product,
 - b. adding water to the heat sink in an amount not greater than 15% of the end product,
 - c. adding urea to the mixture in an amount of at least 50% of the total weight of the end product,
 - d. adding concentrated sulfuric acid in an amount equal to at least 10% of the total weight of the end product.
2. The process of claim 1 wherein the heat sink is recycled liquid fertilizer.

Procedural History

Verdegaal brought suit against Union Oil in the United States District Court for the Eastern District of California charging that certain processes employed by Union Oil for making liquid fertilizer products infringed all claims of its '343 patent. Union Oil defended on the grounds of noninfringement and patent invalidity under 35 U.S.C. Secs. 102, 103. The action was tried before a jury which returned a verdict consisting of answers to five questions. Pertinent here are its answers that the '343 patent was "valid" over the prior art, and that certain of Union Oil's processes infringed claims 1, 2, and 4 of the patent. None were found to infringe claims 3 or 5. Based on the jury's verdict, the district court entered judgment in favor of Verdegaal.

Having unsuccessfully moved for a directed verdict under Fed.R.Civ.P. 50(a), Union Oil timely filed a motion under Rule 50(b) for JNOV seeking a judgment that the claims of the '343 patent were invalid

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under sections 102 and 103. The district court denied the motion without opinion.

II

ISSUE PRESENTED

Did the district court err in denying Union Oil's motion for JNOV with respect to the validity of claims 1, 2, and 4 of the '343 patent?

III

Standard of Review

When considering a motion for JNOV a district court must: (1) consider all of the evidence; (2) in a light most favorable to the non-moving party; (3) drawing all reasonable inferences favorable to that party; (4) without determining credibility of the witnesses; and (5) without substituting its choice for that of the jury's in deciding between conflicting elements of the evidence. *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 1512-13, 220 USPQ 929, 936 (Fed.Cir.), cert. denied, 469 U.S. 871, 105 S.Ct. 220, 83 L.Ed.2d 150 (1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1546, 220 USPQ 193, 197 (Fed.Cir.1983). A district court should grant a motion for JNOV only when it is convinced upon the record before the jury that reasonable persons could not have reached a verdict for the nonmoving party. *Railroad Dynamics*, 727 F.2d at 1513, 220 USPQ at 936; *Connell*, 722 F.2d at 1546, 220 USPQ at 197.

To reverse the district court's denial of the motion for JNOV, Union Oil must convince us that either the jury's factual findings are not supported by substantial evidence, or, if they are, that those findings cannot support the legal conclusions which necessarily were drawn by the jury in forming its verdict. See *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893, 221 USPQ 669, 673 (Fed.Cir.), cert. denied, 469 U.S. 857, 105 S.Ct. 187, 83 L.Ed.2d 120 (1984); *Railroad Dynamics*, 727 F.2d at 1512, 220 USPQ at 936. Substantial evidence is more than just a mere scintilla; it is such relevant evidence from the record taken as a whole as a reasonable mind might accept as adequate to support the finding under review. *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229, 59 S.Ct. 206, 216, 83 L.Ed. 126 (1938); *Perkin-Elmer*, 732 F.2d at 893, 221 USPQ at 673; *SSIH Equip. S.A. v. U.S. Int'l Trade Comm'n*, 718 F.2d 365, 371 n. 10, 218 USPQ 678, 684 n. 10 (Fed.Cir.1983). A trial court's denial of a motion for JNOV must stand unless the evidence is of such quality and weight that reasonable and fair-minded persons in the exercise of impartial judgment could not reasonably return the jury's verdict. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758, 221 USPQ 473, 477 (Fed.Cir.1984).

Our precedent holds that the presumption of validity afforded a U.S. patent by 35 U.S.C. Sec. 282 requires that the party challenging validity prove the facts establishing invalidity by clear and convincing evidence. *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360, 220 USPQ 763, 770 (Fed.Cir.), cert. denied, 469 U.S. 821, 105 S.Ct. 95, 83 L.Ed.2d 41 (1984). Thus, the precise question to be resolved in this case is whether Union Oil's evidence is so clear and convincing that reasonable jurors could only conclude that the claims in issue were invalid. See *Perkin-Elmer*, 732 F.2d at 893, 221 USPQ at 673; *Railroad Dynamics*, 727 F.2d at 1511, 220 USPQ at 935.

Anticipation

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See, e.g., *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715, 223 USPQ 1264, 1270 (Fed.Cir.1984); *Connell*, 722 F.2d at 1548, 220 USPQ at 198; *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed.Cir.1983), cert. denied, 465 U.S. 1026, 104 S.Ct. 1284, 79 L.Ed.2d 687 (1984). Union Oil asserts that the subject claims of the '343 patent

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are anticipated under 35 U.S.C. Sec. 102(e) 1 by the teachings found in the original application for U.S. Patent No. 4,315,763 to Stoller, which the jury was instructed was prior art.

From the jury's verdict of patent validity, we must presume that the jury concluded that Union Oil failed to prove by clear and convincing evidence that claims 1, 2, and 4 were anticipated by the Stoller patent. See *Perkin-Elmer*, 732 F.2d at 893, 221 USPQ at 673; *Railroad Dynamics*, 727 F.2d at 1516, 220 USPQ at 939. Under the instructions of this case, this conclusion could have been reached only if the jury found that the Stoller patent did not disclose each and every element of the claimed inventions. Having reviewed the evidence, we conclude that substantial evidence does not support the jury's verdict, and, therefore, Union Oil's motion for JNOV on the grounds that the claims were anticipated should have been granted.

The Stoller patent discloses processes for making both urea-phosphoric acid and urea-sulfuric acid fertilizers. Example 8 of Stoller specifically details a process for making 30-0-0-10 urea-sulfuric acid products. There is no dispute that Example 8 meets elements b, c, and d of claim 1, specifically the steps of adding water in an amount not greater than 15% of the product, urea in an amount of at least 50% of the product, and concentrated sulfuric acid in an amount of at least 10% of the product. Verdegaal disputes that Stoller teaches element a, the step of claim 1 of "providing a non-reactive, nutritive heat sink." As set forth in claim 2, the heat sink is recycled fertilizer. 2

The Stoller specification, beginning at column 7, line 30, discloses:

Once a batch of liquid product has been made, it can be used as a base for further manufacture. This is done by placing the liquid in a stirred vessel of appropriate size, adding urea in sufficient quantity to double the size of the finished batch, adding any water required for the formulation, and slowly adding the sulfuric acid while stirring. Leaving a heel of liquid in the vessel permits further manufacture to be conducted in a stirred fluid mass.

This portion of the Stoller specification explicitly teaches that urea and sulfuric acid can be added to recycled fertilizer, i.e., a heel or base of previously-made product. Dr. Young, Union Oil's expert, so testified. Verdegaal presented no evidence to the contrary.

Verdegaal first argues that Stoller does not anticipate because in Stoller's method sulfuric acid is added slowly, whereas the claimed process allows for rapid addition. However, there is no limitation in the subject claims with respect to the rate at which sulfuric acid is added, and, therefore, it is inappropriate for Verdegaal to rely on that distinction. See *SSIH*, 718 F.2d at 378, 218 USPQ at 689. It must be assumed that slow addition would not change the claimed process in any respect including the function of the recycled material as a heat sink.

Verdegaal next argues that the testimony of Union Oil's experts with respect to what Stoller teaches could well have been discounted by the jury for bias. Discarding that testimony does not eliminate the reference itself as evidence or its uncontradicted disclosure that a base of recycled fertilizer in a process may be used to make more of the product.

Verdegaal raises several variations of an argument, all of which focus on the

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failure of Stoller to explicitly identify the heel in his process as a "heat sink." In essence, Verdegaal maintains that because Stoller did not recognize the "inventive concept" that the heel functioned as a heat sink, Stoller's process cannot anticipate. This argument is wrong as a matter of fact and law. Verdegaal's own expert, Dr. Bahme, admitted that Stoller discussed the problem of high temperature caused by the

exothermic reaction, and that the heel could function as a heat sink. 3 In any event, Union Oil's burden of proof was limited to establishing that Stoller disclosed the same process. It did not have the additional burden of proving that Stoller recognized the heat sink capabilities of using a heel. Even assuming Stoller did not recognize that the heel of his process functioned as a heat sink, that property was inherently possessed by the heel in his disclosed process, and, thus, his process anticipates the claimed invention. See *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981); *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 229 (CCPA 1971). The pertinent issues are whether Stoller discloses the process of adding urea and sulfuric acid to a previously-made batch of product, and whether that base would in fact act as a heat sink. On the entirety of the record, these issues could only be resolved in the affirmative.

On appeal Verdegaal improperly attempts to attack the status of the Stoller patent as prior art, stating in its brief:

Verdegaal also introduced evidence at trial that the Stoller patent is not prior art under 35 U.S.C. Secs. 102(e)/103. Professor Chisum testified that the Stoller patent, in his opinion, was not prior art.... This conclusion finds support in *In re Wertheim*, 646 F.2d 527 (CCPA 1981), and 1 Chisum on Patents Sec. 3.07.

Appellee Brief at 27 (record cite omitted). Seldom have we encountered such blatant distortion of the record. A question about the status of the Stoller disclosure as prior art did arise at trial. Union Oil asserted that, even though the Stoller patent issued after the '343 patent, Stoller was prior art under section 102(e) as of its filing date which was well before the filing date of Verdegaal's application. Professor Chisum never testified that the Stoller patent was not prior art, but rather, stated that he did not know whether it was prior art. An excerpt from the pertinent testimony leaves no doubt on this point:

Q. (Mr. Sutton): And do you know whether the Stoller patent is prior art to the application of the Verdegaal patent?

A. (Prof. Chisum): I don't know that it is, no.

We find it even more incredible that Verdegaal would attempt to raise an issue with respect to the status of the Stoller patent given that the case was submitted to the jury with the instruction that the original Stoller patent application was prior art. 4 Verdegaal made no objection to that instruction below, and in its appeal briefs, the instruction is cavalierly ignored.

In sum, Verdegaal is precluded from arguing that the Stoller patent should not be considered prior art. See Fed.R.Civ.P. 51; *Weinar v. Rollform Inc.*, 744 F.2d 797, 808, 223 USPQ 369, 375 (Fed.Cir.1984), cert. denied, 470 U.S. 1084, 105 S.Ct. 1844, 85 L.Ed.2d 143 (1985); *Bio-Rad Laboratories, Inc. v. Nicolet Instrument Corp.*, 739 F.2d 604, 615, 222 USPQ 654, 662 (Fed.Cir.), cert. denied, 469 U.S. 1038, 105 S.Ct. 516, 83 L.Ed.2d 405 (1984). 5

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After considering the record taken as a whole, we are convinced that Union Oil established anticipation of claims 1, 2, and 4 by clear and convincing evidence and that no reasonable juror could find otherwise. Consequently, the jury's verdict on validity is unsupported by substantial evidence and cannot stand. Thus, the district court's denial of Union Oil's motion for JNOV must be reversed.

Conclusion

 fastcase

Because the issues discussed above are dispositive of this case, we do not find it necessary to reach the other issues raised by Union Oil. 6 In accordance with this opinion, we reverse the portion of the judgment entered on the jury verdict upholding claims 1, 2, and 4 of the '343 patent as valid under section 102(e) and infringed.

REVERSED.

1 Section 102(e) provides:

A person shall be entitled to a patent unless--

....

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent....

2 Claim 4 is written in terms of approximate percentages of all reactants by weight of the end product. No argument is made that the process of claim 4 would result in a fertilizer product any different from that disclosed by Example 8 of Stoller.

3 There is no dispute that the percentage of heel described in Stoller meets the percentage of heat sink required by the claims.

4 The jury instruction read:

Stoller filed two patent applications--an original application on October 30th, 1978, and a second on February 7th, 1980. Under the patent laws, the claims of the 343 patent are invalid if you find that the original application (Exhibit BL) anticipates the process claimed in the 343 patent.

5 Union Oil also argues that Verdegaal's counsel misled the jury by its closing rebuttal argument:

[B]ut I think it's important to keep in mind that [Stoller] couldn't have been a prior patent because it issued a month after the Verdegaal patent had issued.

We disapprove of Verdegaal's tactic which would form the basis for a grant of a motion for a new trial but for our conclusion that outright reversal of the ruling on the motion for JNOV is in order.

6 It should not be inferred that all of these issues were properly before us. Union Oil appears to assume that on appeal it may dispute the resolution of any issue which is denominated an "issue of law" even though it was not raised in its motion for JNOV. This is incorrect. See Railroad Dynamics, 727 F.2d at 1511, 220 USPQ at 934.

424 F.2d 1382
Application of David W. WILSON.
Patent Appeal No. 8271.
United States Court of Customs and Patent Appeals.
May 7, 1970.

Oberlin, Maky, Donnelly & Renner, William E. Thomson, Jr., John C. Oberlin, Cleveland, Ohio, attorneys of record, for appellant.

Joseph Schimmel, Washington, D. C., for the Commissioner of Patents. Raymond E. Martin, Washington, D. C., of counsel.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN and LANE, Judges, and FORD, Judge, United States Customs Court, sitting by designation.

LANE, Judge.

This appeal is from the decision of the Patent Office Board of Appeals, which affirmed the rejection of claims 1-4, 8-10, and 15-21 in appellant's application serial No. 332,321, filed November 5, 1963, for "Treated Brush and Brush Treating Composition." Four other claims have been allowed. We conclude that the board's decision must be reversed.

THE DISCLOSURE

Appellant's disclosure discusses certain problems in the treatment of power-driven rotary brushes. According to the disclosure, it was desirable to produce

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a composition for treating the brush bristles, whereby the ability of the bristles to hold abrasive particles would be enhanced. It discloses that the treatment composition should have a strength of adhesion to the brush bristles sufficiently great to prevent such composition from transferring excessively to the object being brushed; that the treatment material should wear at substantially the same rate as the brush bristles; that the material should have a high temperature softening point; and that the strength of adhesion between the treating composition and the abrasive particles must be sufficient to withstand the centrifugal force which normally would tend to throw the abrasive outwardly from the brush. The disclosure states that previously known brush-treating compositions did not accomplish all these objectives and had a tendency to dry and lose their tackiness over a period of time, thus becoming useless for holding abrasive particles on the bristles.

The disclosure states that appellant discovered that a composition having a high temperature softening point and a high degree of tackiness could be produced if a film-forming resin were blended with a tackifier resin which was incompatible with (insoluble in) the film-forming resin. The resulting composition would have two distinct phases: a continuous phase comprised of film-forming resin, either alone or saturated with a small quantity of tackifier resin, and a dispersed phase comprised of small particles of tackifier resin. The two resins may be either completely or partially incompatible, and the disclosure states that the more insoluble the resins, the greater the tack which the composition possesses. Appellant also disclosed that certain plasticizers could be added to render the resins more incompatible, thus further increasing the tack of the composition. Finally, appellant stated that the entire composition

could be dissolved in a volatile solvent to allow easy application to the brush, the solvent being one which quickly evaporates upon such application.

The specification contains a list of suitable film-forming resins, including ethyl cellulose, nitro cellulose, cellulose acetate, polyvinyl acetate and cis-polyisoprene, among other materials. A list of tackifiers is given, including certain esters of abietic acid, polyvinyl ethyl ether, coumarone indene resin and terpene resins. A list of plasticizers is also given. The specification then gives four examples showing how to combine various film-formers, tackifiers, plasticizers and solvents to obtain brush-treating compositions of the desired characteristics, and explains how to apply them to brushes.

THE CLAIMS

In view of the result we reach, we find that claims 1 and 8 are representative:

1. A two-phase brush treating composition having a high softening point and sufficient tack to retain abrasive material firmly adhered to brush fill material comprising a film-forming resin and a tackifier resin which is incompatible with said film-forming resin, said two phases comprising a continuous phase formed of said film-forming resin and a dispersed phase formed of small particles of tackifier resin.

8. In combination, a rotary brush having brush fill material and a two-phase pressure sensitive adhesive brush treating composition adhered thereto having a high softening point and sufficient tack to retain abrasive material firmly adhered to such brush fill material comprising a film-forming resin and a tackifier resin which is incompatible with said film-forming resin, said two phases comprising a continuous phase formed of said film-forming resin and a dispersed phase formed of small particles of tackifier resin.

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The remaining claims on appeal are narrower, containing recitations of specific resins, plasticizers, etc.

THE PRIOR ART

Grantham¹ relates to coatings for film material and discloses a coating composition comprising a cellulose derivative film-former, a blending resin, a plasticizer, and an organic solvent. Grantham teaches that the blending agent and the film-former should be compatible.

Depew² teaches the preparation of emulsions consisting of a continuous phase of water and a discontinuous phase of elastomer particles and particles of a volatile hydrocarbon, with vulcanizing ingredients and other additives dispersed in the hydrocarbon particles. Depew then states that where a dispersion with additional adhesive properties is desired, an adhesive, such as certain of the tackifier resins disclosed by appellants, can be added to the emulsion, and that

[t]his adhesive can be water soluble or dispersed as particles. * * * The chemistry of the adhesive component is not critical to this invention. The important thing is that the deposited film shall be tacky and adhesive.

Sergi³ relates to adhesives suitable for installation of floor-covering products such as linoleum. Sergi's composition consists of a tackifier resin dispersed in a latex binder; the tackifier and latex must be compatible with one another, according to the Sergi disclosure.

Vaughan⁴ teaches impregnating a fibrous buffing wheel with an aqueous emulsion consisting of a tacky resin and an emulsifier or stabilizer such as glue or gum.

THE BOARD

The board found the composition claims to be unpatentable over Depew, Sergi or Grantham under 35 U.S.C. § 103. The board reached this conclusion after noting that each of the three references shows some of the film-formers, tackifiers, plasticizers and solvents appearing in appellant's lists. The board found that the recited limitation of incompatibility was too relative a term to distinguish over the compositions of the references.

The board found that the claims to the treated brush were unpatentable, under 35 U.S.C. § 103, over Vaughan in view of Sergi or Depew. Since Vaughan shows treating brushes, the board apparently considered it obvious to treat brushes with compositions which it thought were made obvious by Sergi or Depew.

The board also affirmed the rejection of certain claims for being "broader than the disclosure" under 35 U.S.C. § 112. The board's basis for this rejection was that the specification did not provide adequate guidelines for making a selection among the various disclosed ingredients, nor among other materials which are not disclosed but would be included by the claims.

OPINION

We first treat the rejection under section 112. This rejection is in effect an attack on the specification as being insufficient to teach how to practice the broad invention claimed. The rejection is therefore under the first paragraph of section 112. The board's position, as mentioned above, was that the specification did not teach how to select ingredients so that the desired incompatibility would result. We disagree with the board's position on this point. First of all, appellant provided four examples, each specifying the nature and amounts of materials to be used. Secondly, the record indicates that it involves only routine experimentation to find out which resins are incompatible. The examiner admitted as much when,

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with regard to obviousness, he said "selecting the proper tackifier and film-forming resin from those listed in the references to form an emulsion or two-phase composition would be within the expected skill of the art and would merely involve routine experimentation." We conclude that appellant has provided a sufficient specification to support the claims here in issue.

Turning to the rejection of the claims for obviousness, we again disagree with the board's position. The board has disregarded the term "incompatible," as used in the claims, because it is "too relative" to distinguish over the compositions of the references. Appellant contends this limitation is essential in defining his invention. There has been no rejection here for indefiniteness, under the second paragraph of section 112. Rather than reject the claims as indefinite, the board chose to ignore the language it considered indefinite, and proceeded as though that language were not in the claims. The board said, in effect, that since we do not know what "incompatible" means, and the rest of the claim defines obvious subject matter, there is no basis for concluding unobviousness. This reasoning is incorrect. All words in a claim must be considered in judging the patentability of that claim against the prior art. If no reasonably definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious — the claim becomes indefinite. In the present case, we think the term "incompatible" is defined with reasonable definiteness in the specification. While it is true that the word is not perfectly precise, under the circumstances of the present case there appears to be no other way for appellant to describe his

discovery. In any event, the ignoring of this term by the board renders its conclusion of obviousness unsupported. None of the references discloses a two-phase composition of incompatible resins or suggests that such a composition would have the properties disclosed by appellant. Grantham and Sergi both expressly teach that the components of their compositions should be compatible. Neither Vaughan nor Depew uses a resin as the continuous phase. While Depew states, as quoted above, that the adhesive material may be dispersed as particles in the continuous phase, and hence be incompatible with the continuous phase material, it cannot be ignored that Depew's continuous phase is of water, not a film-forming resin as recited in appellant's claims. Furthermore, there is no suggestion in Depew or Vaughan that there are advantages in using an adhesive which is insoluble in the aqueous phase. There is nothing of record, therefore, from which we can properly conclude that the subject matter of appellant's claims would have been obvious at the time of his invention. The decision of the board must accordingly be reversed.

Reversed.

Notes:

1. U.S.Pat. 3,051,670, issued August 28, 1962.
 2. U.S.Pat. 2,933,469, issued April 19, 1960.
 3. U.S.Pat. 3,015,638, issued January 2, 1962.
 4. U.S.Pat. 2,890,136, issued June 9, 1959.
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[54] PAINT ROLLER FRAME WITH SPRAY
SHIELD AND CLEAN-UP MEANS

[76] Inventor: Robert I. Hanssen, 116 Sibley
Memorial Hwy., St. Paul, Minn.
55118

[22] Filed: Oct. 10, 1972

[21] Appl. No.: 296,235

[52] U.S. Cl. 15/230.11, 15/248 A, 401/15

[51] Int. Cl. B44d 3/28

[58] Field of Search 15/230.11, 248 A, 248 R,
15/27, 179; 29/110.5; 401/15

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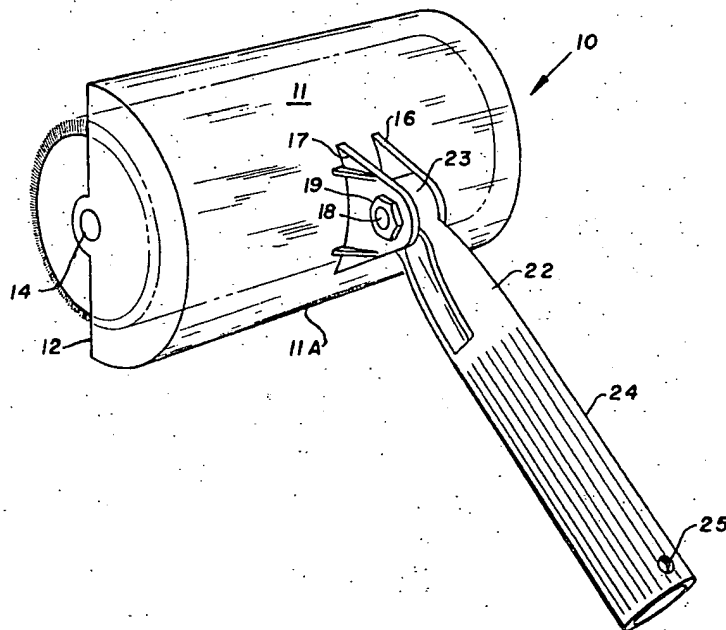
Primary Examiner—Leon G. Machlin

[57]

ABSTRACT

A paint roller retaining frame having an integral spray shield which is also arranged to accommodate clean-up of the used paint roller, with the frame being arranged to releasably retain or suspend cylindrical paint-applying rollers therein. The device comprises structural features providing, in combination; frame means for achieving releasable roller retention, a generally semi-cylindrical casing shell or enclosure having a pair of end plates and forming a substantial portion of the frame means and including means for retaining a roller receiving end cup therewithin for releasable roller retention. The integral frame and shield structure is preferably generally transparent so as to assist the user in viewing the action of the roller on the surface being painted and is also provided with a support edge surface which assists in guiding a flow of water to clean the roller after use. The end cups retain the paint-applying roller with its end or edge closely adjacent the end plate, so as to maximize the area capable of being covered with the roller. A centrally mounted pivotally adjustable handle is provided, the handle being centrally located on the outer circumference of the shield portion so as to provide a central pressure point to equalize pressure on both ends of the roller during use.

8 Claims, 6 Drawing Figures



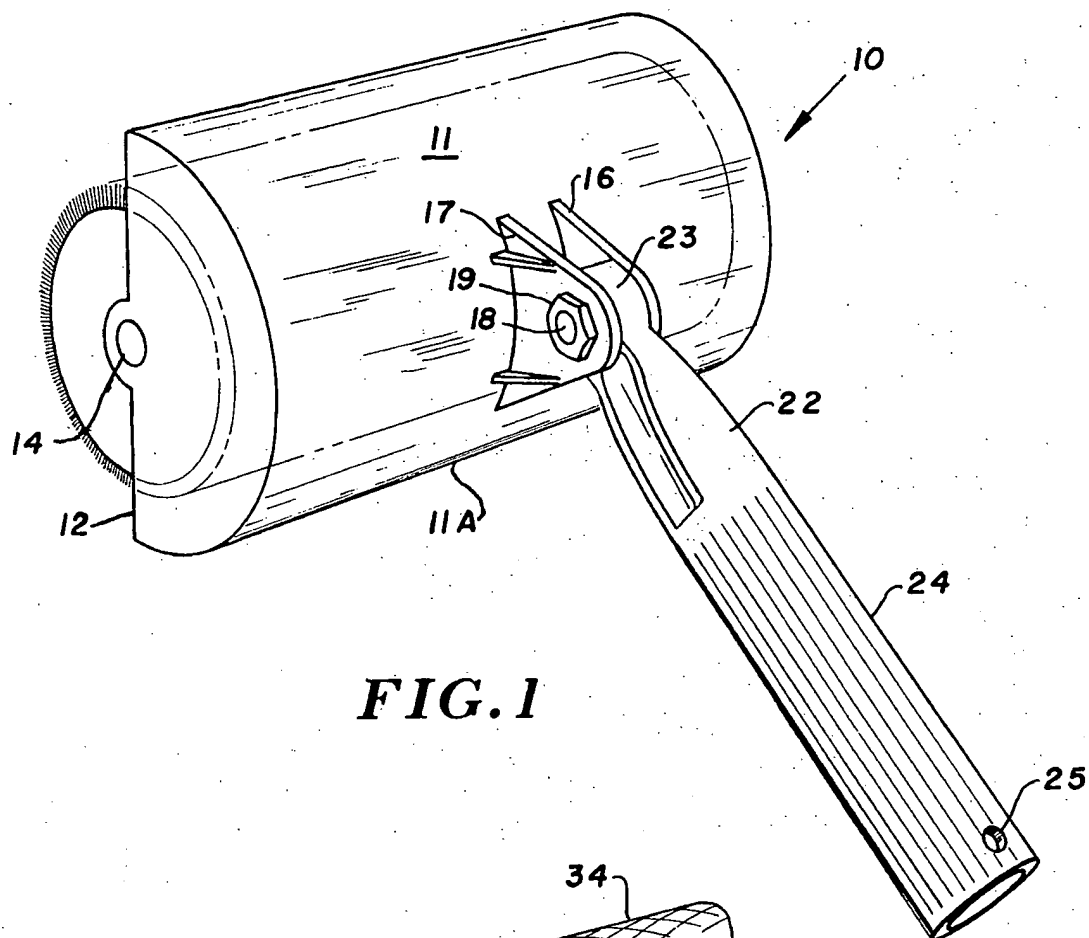


FIG. 1

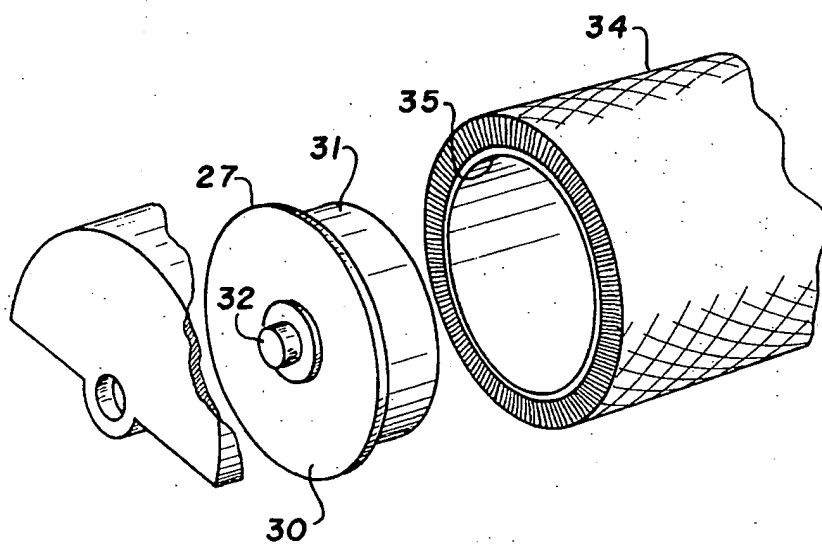


FIG. 2

FIG. 3

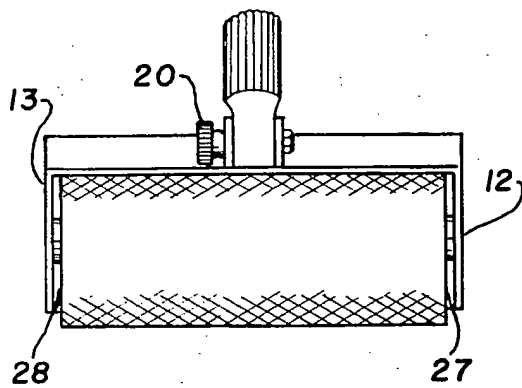
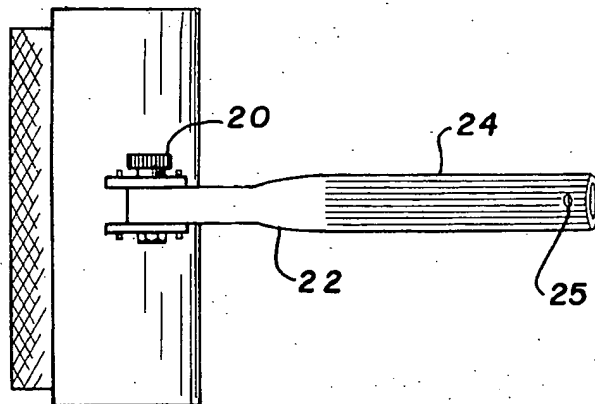


FIG. 4

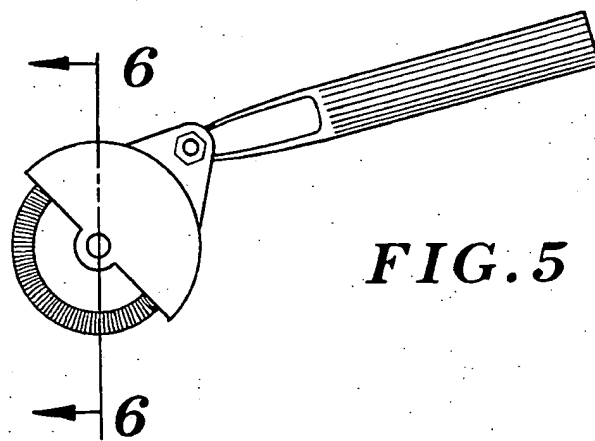


FIG. 5

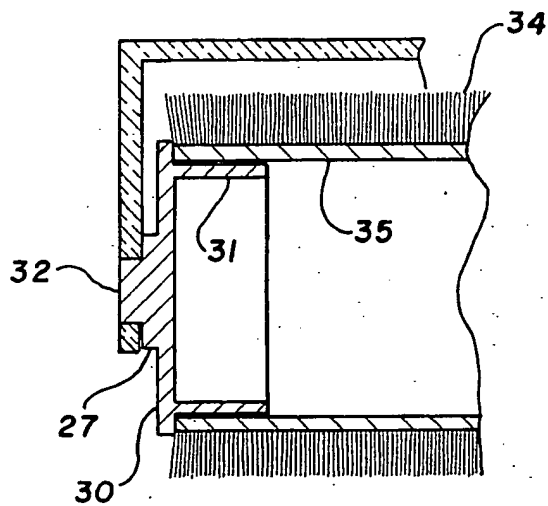


FIG. 6

PAINT ROLLER FRAME WITH SPRAY SHIELD AND CLEAN-UP MEANS

BACKGROUND OF THE INVENTION

The present invention relates generally to an improved paint roller retaining frame having an integral spray shield forming a portion of the frame structure, and with the frame means being arranged to receive a pivotally adjustable handle at a point centrally of the roller length. The apparatus is arranged to releasably retain paint-applying rollers during application of paint, while being arranged to further assist in clean-up of the roller after use. The frame has a shield portion which is preferably transparent, and the pivotally adjustable handle means is centrally mounted on the outer circumference of the shield. Tiltable adjustment of the handle means permits the user to achieve the best angle of operation during paint application, particularly when an extension pole is being utilized. The edge or lip of the shield portion provide structural features which assist in directing a flow of water onto the roller surface to accommodate clean-up after use.

The frame means is constructed so as to retain the paint roller at a point relatively close to the end of the frame and shield, thus maximizing the area capable of being covered by the user. During use, the shield or enclosure portion of the structure shields the area adjacent the area being painted as well as the user from inadvertent spraying or dripping of paint from the roller during use. The integral frame and shield structure of the present invention permits and facilitates ease of application of paint to ceiling surfaces as well as wall surfaces, with the tiltably adjustable handle means permitting safe and simple operation from a variety of operating angles and positions. The structure also permits ease of removal and changing of rollers before and after use. During clean-up of the paint roller and cover structure after use, the shield structure provides an edge surface assist in directing a flow of water or other cleaning solution to the roller while continuing to shield the user, and also providing an enclosure within which effective washing action may take place.

In the past, it has been traditional to utilize wire to make unshielded roller frames with either plastic or wood handles attached to the wire. The wire is bent or formed in such a manner so as to locate the handle in a central position while entering the roller from one end only. However, in such structures, normal pressure applied to the handle is necessarily transmitted to the roller surface unequally over the roller length. Equal pressure on both ends of the roller may be achieved only by the user applying a slight twisting force or torque at the handle.

While unshielded rollers are suitable for certain purposes, they suffer from the disadvantage of permitting a spray of paint from the rapidly revolving roller surface. Dripping of paint is also possible in an unshielded roller. Roller spray shields, if used, are normally provided as attachments to a conventional wire frame and are opaque, clumsy and often ineffective for the purpose intended. Existing unshielded rollers are frequently cleaned by hand by massaging the roller under a faucet of running water, with the clean-up procedure being messy and objectionable to most users. Roller cleaning appliances are normally available only as attachments to water faucets, with the usual construction

normally utilizing jets of water that spin the roller and wash out the paint, however, recently clean-up devices have been made available which include an open-top enclosure within which effective washing action may take place.

The present invention offers a significant improvement over existing unshielded paint rollers with or without spray shields as the present structure combines a more effective roller frame, a spray shield, and a roller clean-up device all in one integral unit.

The present invention embodies a more effective frame in that the centrally located and balanced handle provides application of equal pressure to both ends of the roller and its cover therefor. No twisting force is necessary to achieve effective equalized pressure on the roller and its associated cover. The present invention has a pivotally adjustable handle that can be tilted and locked in various pre-selected positions to achieve the best angle of operation on either floors, walls or ceilings.

The spray shield is an integral part of the frame. The shield actually supports and cradles the paint roller during use, while protecting the user and the surrounding area from spray and dripping paint. In the present invention the shield is preferably a clear plastic material that allows visual observation and inspection of the roller while it is being loaded with paint, and also while the paint is being applied to the working surface. This see-through property of the shield can become diminished as the shield fulfills its function of protecting from roller spray, but actual tests prove that the see-through effect is not completely lost even after hours of use during which time the user has had practice and becomes accustomed to the work situation.

Recently, the dominant use of water clean-up latex paints has made practical a transparent molded plastic roller frame, enclosure, and shield. The wide-spread use of paints which clean up in water facilitate and permit clean-up without requiring the use of solvents which would destroy, etch or otherwise impair the transparent plastic nature of the structure. The present invention is also adaptable of the recently available water jet roller clean-up devices that may employ the shield construction as all or part of the cleaning enclosure in which the washing action takes place.

The design features and characteristics of the integral frame and shield structure of the present invention permit conventional use of the device, including the conventional loading of paint onto the roller, as well as conventional motion of the device over the working surface.

The apparatus of the present invention also provides and facilitates ease of cleaning. For example, a cleaning device may be available which includes a simple wash tub faucet adaptor, rubber hose, and nozzle secured to the hose which, together, provide for the application of a jet of water directed against the paint roller at a tangential angle to the roller, thus causing the roller to rotate within the frame means. The water jet spins the paint roller and simultaneously washes out the residual paint and thus cleans the roller. The edge surface of the spray shield provides a guide and support for the nozzle, thus assisting in the cleaning operation. By maneuvering the nozzle and water jet axially along the length of the paint roller while resting on either of the major edges, the entire roller surface can be flushed clean of paint and made ready for drying and re-use. The spray

shield further assists in this technique since it protects the user from paint and water spray that may spin from the roller during the cleaning process.

Another type of clean-up device, recently available, consists of a "spray box." The roller and frame rest on the open top of this box, while multiple jets of water spray from a water source in the box, the source being in the form of a perforated tube. These jets of water are angularly directed to apply their force tangentially to the cylindrical surface of the paint roller. The high pressure jets of water cause the paint roller to revolve at high speed while simultaneously washing the roller free of paint. The "clean-up box" can be operated without necessarily being hand held. The clean-up procedure is accomplished by simply positioning the roller and frame on the top of the box, while allowing the high pressure jets to run for sufficient time to wash the roller free of paint. The spray shield construction of the roller frame, when coupled with the wash box, makes a wash unit that completely encloses or surrounds the paint roller which is being caused to spin at high velocity under the influence of water jets. There is no objectionable spray or splash which can escape from the completely enclosed, clear plastic, see-through wash unit.

SUMMARY OF THE INVENTION

Generally, the integral paint roller frame, spray shield, and roller clean-up means of the present invention comprises a generally semi-cylindrical enclosure or shell having a pair of roller engaging end plates at either end thereof. The shell is preferably molded from transparent materials and is preferably integral with the end plates. The end plates having aligned bores formed therein so as to releasably receive a pair of paint roller retaining end caps therewithin, with the end cups and paint roller cylinder positioned in the shield and arranged for pivotal rotation therewithin. The outer surface of the semi-cylindrical shell portion of the frame is provided with a centrally located handle coupled bracket which has means for receiving a locking pin therewithin, the locking pin extending along an axis which is disposed generally parallel to the elongated axis of the shell. An operating handle (preferably arranged to receive an extension pole) is arranged to be received within the coupling bracket or means and is, of course, arranged for tiltable adjustment therewith.

Therefore, it is a primary object of the present invention to provide an improved integral paint roller frame and shield means for releasably receiving cylindrical paint-applying rollers therewithin during use and clean-up, the frame and shield means being preferably transparent so as to permit visual observation and inspection of the various working areas including the paint tray, and wall, ceiling, or floor surfaces being painted.

It is yet a further object of the present invention to provide an improved integral frame and shield means for cylindrical paint-applying rollers which includes a shield casing or enclosure means comprising a generally semi-cylindrical shell which is formed of a visually clear transparent material so as to provide a spray and drip shield for the paint-applying roller mounted therewithin.

It is yet a further object of the present invention to provide an improved integral frame and shield means for releasably retaining cylindrical paint-applying rollers which includes a casing having a configuration

which provides improved paint application and subsequent clean-up of the paint roller after use.

It is yet a further object of the present invention to provide an improved integral frame and shield means for releasably retaining paint-applying rollers which includes a casing having a generally semi-cylindrical shell or enclosure with a centrally disposed coupling means secured to the shell so as to receive an operating or gripping handle in tiltable adjustable disposition thereon.

Other and further objects of the present invention will become apparent to those skilled in the art upon a study of the following specification, appended claims, and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing the improved integral frame and shield means of the present invention with a cylindrical paint-applying roller being shown as retained therewithin, and illustrating the tiltable adjustable handle in one angular disposition relative to the shield casing;

FIG. 2 is a partial detail perspective view, in exploded disposition, illustrating the end plate of the integral frame and shield structure, a roller receiving end cup, and a portion only of a cylindrical paint-applying roller, the end plate of the frame being arranged to receive the end cup;

FIG. 3 is a top plan view of the structure illustrated in FIG. 1;

FIG. 4 is a bottom plan view of the structure illustrated in FIG. 1;

FIG. 5 is a side elevational view of the structure illustrated in FIG. 1; and

FIG. 6 is a detail sectional view taken along the line and in the direction of the arrows 6—6 of FIG. 5.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In accordance with the preferred modification of the present invention, the integral frame and shield means for releasable working retention of cylindrical paint-applying rollers is generally designated 10 and includes a casing means 11 comprising a generally semi-circular shell portion 11A having a pair of generally semi-circular end plates 12 and 13 at each end thereof. The end plates 12 and 13 have axially aligned bores formed therein, such as at 14—14 for releasable roller retention as more fully described hereinafter. It will also be noted that the axis of the bores 14—14 is preferably coincidental with the axis of the main casing means 11.

The outer peripheral portion or back of shell 11A has a pair of centrally disposed ears 16, 17 secured thereto, with these ears having aligned bores formed therein to receive the shank of bolt 18. Bolt 18 is provided with a nut element 19, along with a knurled cap portion 20 (FIGS. 3—4) to accommodate adjustable locking of tiltable handle 22 therewithin. Handle 22 is provided with a head end 23, along with a body end 24, body end 24 preferably being internally threaded so as to receive an extension pole if desired. Bore 25 is provided in order to receive a locking screw for rigidly attaching an extension pole to the handle portion 24.

As is apparent in the illustration of FIGS. 1 and 5, as well as others, handle 22 may be tiltable adjusted relative to ears 16 and 17 in order to achieve a proper oper-

ating angle between the user and the surface to which paint is being applied.

A pair of end caps 27 and 28 are provided, with these end caps having a generally disc-shape face or plate 30 along with a generally flanged roller engaging means 31 extending outwardly from one surface of disc or plate 30. An axial projecting stub shaft 32 extends axially outwardly from the opposed surface. In times of actual use or operation, the flanged roller engaging surface 31 is received within the inner confines of cylindrical paint-applying roller 34 as along the surface 35, and as shown in detail in FIG. 2. For purposes of enabling and facilitating ease of operation, the axial length of stub shaft or projection 32 is preferably no greater than the thickness of end plate 12 so as to prevent the end of stub shaft 32 from protruding beyond the surface of the end plate. This facilitates ease of application of paint close to the edges of a working surface, particularly when the working surface, such as a wall, floor or ceiling, meets another surface which is disposed at right angles to the working surface.

As has been indicated, the shield element or portion of the frame and shield structure is rigid, durable and preferably transparent in order to provide a rugged structure which permits conventional use while permitting the user to view the working surface. Suitable materials of construction for the transparent element are clear vinyls, high impact polystyrene, acrylics, or the like. It will be appreciated that the materials of construction are not critical to the system, it being noted, however, that a durable material which is resistant to etching or damage from solvents or ordinary oil-base paints should normally receive favorable consideration.

It will be further noted that handle 22 is mounted generally along the center of the back of the frame and shield assembly. This mounting disposition permits the user to apply equal pressure or force across the length of the roller during normal use. The tiltable feature, as previously indicated, permits and facilitates control of the angle at which the frame and shield meets the surface being painted. Also, as has been indicated, while handle 22 may function as a gripping handle per se, the internal surface or portion 24 of handle 22 is preferably threaded in order to receive the tip end of a threaded extension pole or shaft.

As previously indicated, the frame and shield structure of the present invention, in addition to accommodating normal use, facilitates ease of cleaning of the paint-applying roller after use. For example, the edge of the semi-cylindrical shield may be employed as a guide in order to position a water discharge hose or conduit adjacent the roller surface for permitting cleaning of the roller after use. The angle at which the water strikes the surface of the roller may be accurately controlled so as to cause rotation of the roller while it is being retained within the shield. Also, the shield aids in protecting the user from contact with spray which is dispatched from the roller during rotation thereof during washing.

While the structure has been illustrated utilizing a pair of end caps to receive the paint-applying roller, it will be appreciated that the term "end caps" is used in a broad context, since various cylindrical structures could be utilized, including a permanent elongated axle, a wire cage forming a frame or the like, with the end caps or substituted component being the structural

components which physically hold or mount the cylindrical paint-applying roller in the structure.

The radius of curvature of the shield portion 11 of the integral frame and shield structure is preferably large so as to accommodate a wide variety of diameters of paint-applying rollers or cylinders, with the coaxial arrangement being preferred in order to extend the range of diameters which may be received within the shield element.

At the present time, paint-applying rollers or cylinders such as the element 34 are available commercially in a wide variety of diameters, these diameters being, for the most part, standard in the industry. Therefore, inter-changeable end caps may be provided with each having a flanged element or segment 31 of standard or known diameters so as to readily accommodate a standard roller thereon. An interference or friction fit is, normally, preferred.

The availability of materials of construction is presently sufficiently wide so as to accommodate both latex-base paint and oil-base paint. The solvent system used will therefore be compatible with any of a variety of materials of construction that may be used for the apparatus of the present invention.

To accommodate assembly, the individual end caps 31-31 are inserted within the ends of the pre-selected roller element. Thereafter, one of the stub shafts is engaged or inserted in the end plate bore, with the roller axis being generally canted relative to the frame axis. At this point, a modest depressing force is applied to the free end plate, preferably near the center, so as to flex the end plate and end cap to permit engagement of the free stub shafts 32 in the other bore. The same technique may be utilized to remove the paint roller from the frame, that is, by depressing the end plate to cause flexure of the end cap until disengagement may be achieved. The acrylic materials which have been found useful in connection with this device have sufficient flexibility so as to permit ease of mounting of the end caps for roller retention thereon.

It will be appreciated that various departures may be made from the detailed description presented herein without departing from the nature of the invention, including a substitution of materials, component configurations or the like.

I claim:

1. Apparatus for releasably receiving a paint-applying roller, and comprising an integral paint roller frame, spray shield and roller cleaning means, said apparatus including, in combination:

- a. casing means comprising a generally semi-cylindrical shell having an elongated axis and having generally semi-circular end plates on the ends thereof and forming a frame portion and shield enclosure;
- b. coupling means comprising a pair of generally up-standing ears attached to the outer cylindrical surface of said shell and having pin means extending along an axis generally parallel to said elongated axis and forming a pivotal handle coupling shaft;
- c. operating handle means having a transverse bore formed therein for receiving said pivotal coupling shaft, and means for releasably locking a portion of said operating handle means between said pair of generally upstanding ears;
- d. flexible cylindrical paint roller mounting and coupling means including said semi-circular end plates

and a generally cup-shaped member with a base plate and generally cylindrical flanged roller engaging means extending outwardly from one surface of said base plate, and an axially projecting stub shaft extending from the opposed surface of said base plate, said flexible cylindrical paint roller and coupling means being arranged for relative axial motion with said semi-cylindrical shell in response to flexural forces being applied to said flexible cylindrical paint roller and coupling means for accommodating removable insertion of an assembly consisting of a pair of said cup-shaped roller mounting means disposed on opposite ends of a paint-applying roller; and

e. said end plates having generally axially aligned bores formed therein for receiving said stub shafts within said shell casing when in engagement with a paint-applying roller and for accommodating free rotation of said roller mounting means within said shell.

2. The apparatus as defined in claim 1 being particularly characterized in that said stub shafts have an axial length which is no greater than the thickness of said end plates.

3. The apparatus as claimed in claim 1 being particularly characterized in that said casing means is fabricated from an optically transparent material.

4. The apparatus as defined in claim 1 being particularly characterized in that said upstanding ears are disposed along and on either side of the mid-point of the elongated axis of said semi-cylindrical shell.

5. The apparatus as defined in claim 1 being particularly characterized in that said handle means is tiltably adjustable relative to said semi-cylindrical shell.

6. Apparatus for releasably receiving a paint-applying roller, and comprising an integral paint roller frame, spray shield and roller cleaning means, said apparatus including, in combination:

a. casing means comprising a generally semi-cylindrical shell having an elongated axis and having generally semi-circular end plates on the ends thereof and forming a frame portion and shield enclosure;

b. coupling means comprising a pair of generally upstanding ears attached to the outer cylindrical surface of said shell and having pin means extending along an axis generally parallel to said elongated axis and forming a pivotal handle coupling shaft;

c. operating handle means having a transverse bore formed therein for receiving said pivotal coupling shaft, and means for releasably locking a portion of said operating handle means between said pair of generally upstanding ears;

d. cylindrical paint roller mounting means comprising a generally cup-shaped member with a base plate and generally cylindrical flanged roller engaging means extending outwardly from one surface of said base plate, and an axial projecting stub shaft extending from the opposed surface of said base plate, with said base plate portions of said flanged roller engaging means being flexible; and

e. said end plates having generally axially aligned bores formed therein for receiving said stub shafts within said shell casing when in engagement with a paint-applying roller and for accommodating free rotation of said roller mounting means within said shell.

7. Apparatus for releasably receiving a paint-applying roller, and comprising an integral paint roller frame, spray shield and roller cleaning means, said apparatus including, in combination:

a. casing means comprising a generally semi-cylindrical shell having an elongated axis and having generally semi-circular end plates on the ends thereof and forming a frame portion and shield enclosure;

b. coupling means comprising a pair of generally upstanding ears attached to the outer cylindrical surface of said shell and having pin means extending along an axis generally parallel to said elongated axis and forming a pivotal handle coupling shaft;

c. operating handle means having a transverse bore formed therein for receiving said pivotal coupling shaft, and means for releasably locking a portion of said operating handle means between said pair of generally upstanding ears;

d. cylindrical paint roller mounting means comprising a generally cup-shaped member with a base plate and generally cylindrical flanged roller engaging means extending outwardly from one surface of said base plate, and an axially projecting stub shaft extending from the opposed surface of said base plate; and

e. said end plates having generally axially aligned bores formed therein for receiving said stub shafts within said shell casing when in engagement with a paint-applying roller and for accommodating free rotation of said roller mounting means within said shell, said end plates being generally flexible and arranged for flexure about said semi-cylindrical shell casing for accommodating removable insertion of an assembly consisting of a pair of said cup-shaped roller mounting means disposed on opposite ends of a paint-applying roller.

8. Apparatus for releasably receiving a paint-applying roller, and comprising an integral paint roller frame, spray shield and roller cleaning means, said apparatus including, in combination:

a. casing means comprising a generally semi-cylindrical shell having an elongated axis and having generally semi-circular end plates on the ends thereof and forming a frame portion and shield enclosure;

b. coupling means comprising a pair of generally upstanding ears attached to the outer cylindrical surface of said shell and having pin means extending along an axis generally parallel to said elongated axis and forming a pivotal handle coupling shaft;

c. operating handle means having a transverse bore formed therein for receiving said pivotal coupling shaft, and means for releasably locking a portion of said operating handle means between said pair of generally upstanding ears;

d. cylindrical paint roller mounting means comprising a generally cup-shaped member with a base plate and generally cylindrical flanged roller engaging means extending outwardly from one surface of said base plate, and an axially projecting stub shaft extending from the opposed surface of said base plate, said base plate portions of said flanged roller engaging means being flexible and arranged for axial flexure inwardly of a paint-applying roller for accommodating removable insertion of an assembly consisting of a pair of said flanged roller engag-

ing means disposed on opposite ends of a paint-applying roller; and
e. said end plates having generally axially aligned bores formed therein for receiving said stub shafts within said shell casing when in engagement with a 5

paint-applying roller and for accommodating free rotation of said roller mounting means within said shell.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,825,970

Dated July 30, 1974

Inventor(s) Robert I. Janssen

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the caption heading; item [76], the inventor's name should read -- Robert I. Janssen --.

Column 1, line 46, "of" should read -- or --.

Column 3, line 40, "coupled" should read -- coupling --.

Column 6, line 21, "system" should read -- systems --.

Column 8, line 53, "forming" should read -- formed --.

Signed and sealed this 8th day of October 1974.

(SEAL)

Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,825,970 Dated July 30, 1974

Inventor(s) Robert I. Janssen

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the caption heading; item [76], "Robert I. Hanssen, 116 Sibley Memorial Hwy., St. Paul, Minn. 55118" should read -- Robert I. Janssen, 1160 Sibley Memorial Highway, St. Paul, Minn. 55118 --. Column 1, line 46, "of" should read -- or --. Column 3, line 40, "coupled" should read -- coupling --. Column 6, line 21, "system" should read -- systems --. Column 8, line 53, "forming" should read -- formed --.

This certificate supersedes Certificate of Correction issued Oct. 8, 1974.

Signed and sealed this 15th day of October 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

[54] TRAY HAVING PAINT TRANSFER ROLLER FOR PAD PAINTERS

[75] Inventor: Eugene F. Dumesnil, Jr., Glen Rock, N.J.

[73] Assignee: Tip Top Industries, Inc., Jersey City, N.J.

[21] Appl. No.: 840,257

[22] Filed: Oct. 6, 1977

[51] Int. Cl.² B44D 3/12

[52] U.S. Cl. 15/257.05; 118/258; 220/1 C; 220/85 R

[58] Field of Search 15/104.92, 248 A, 257.05, 15/257.06, 262; 118/252, 258; 222/403; 242/55.2; 401/118

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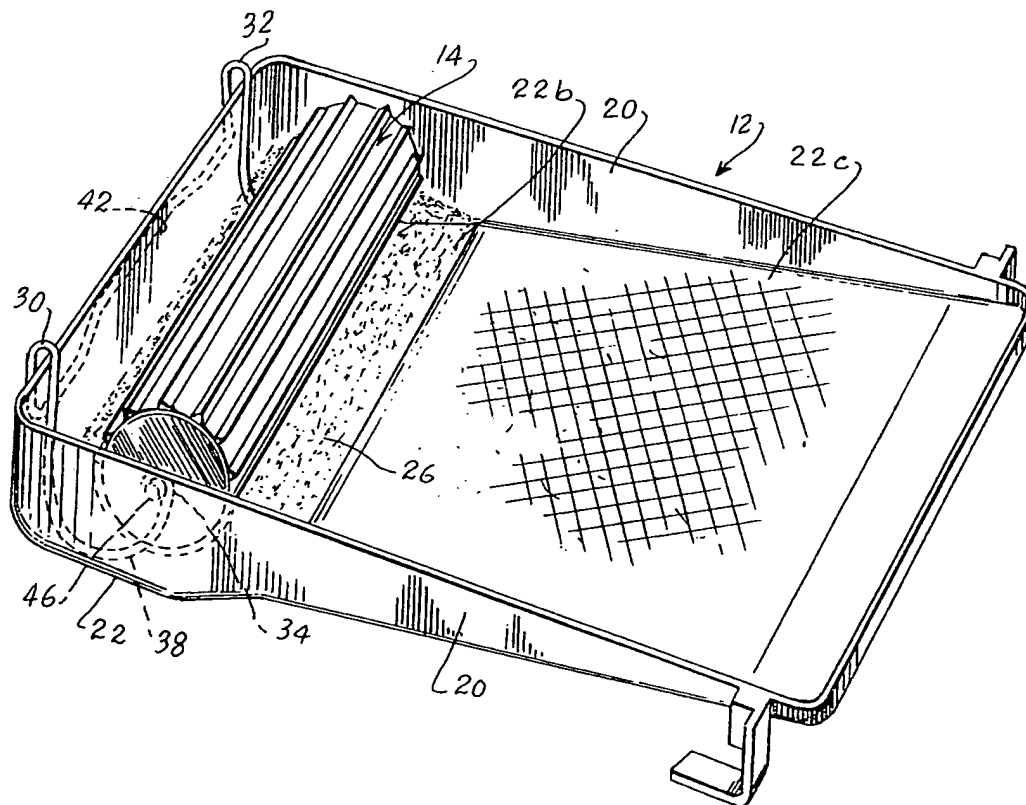
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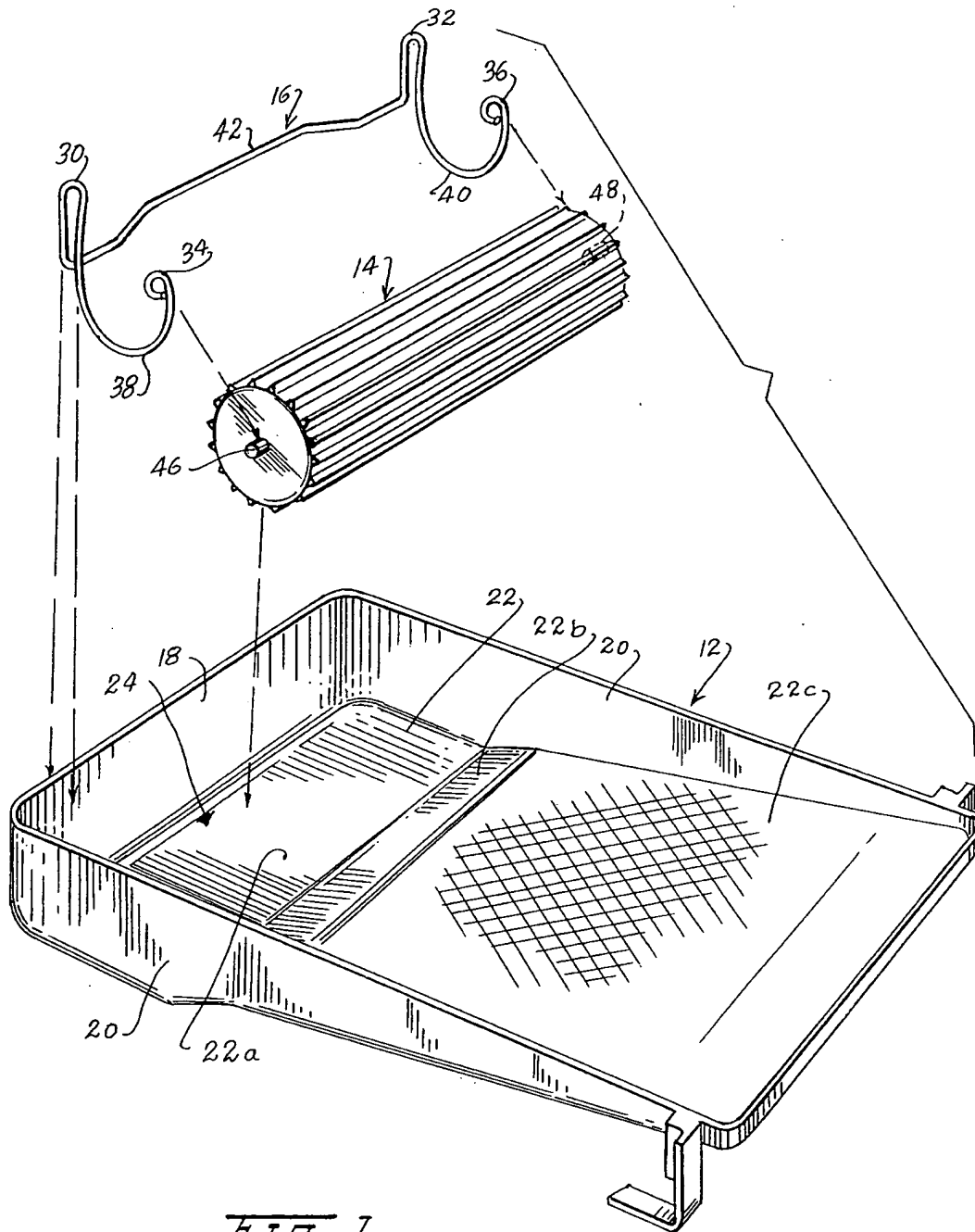
Primary Examiner—Daniel Blum
Attorney, Agent, or Firm—Stoll and Stoll

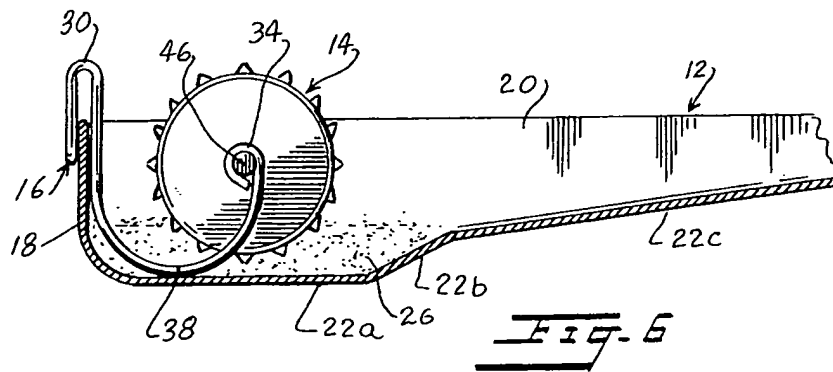
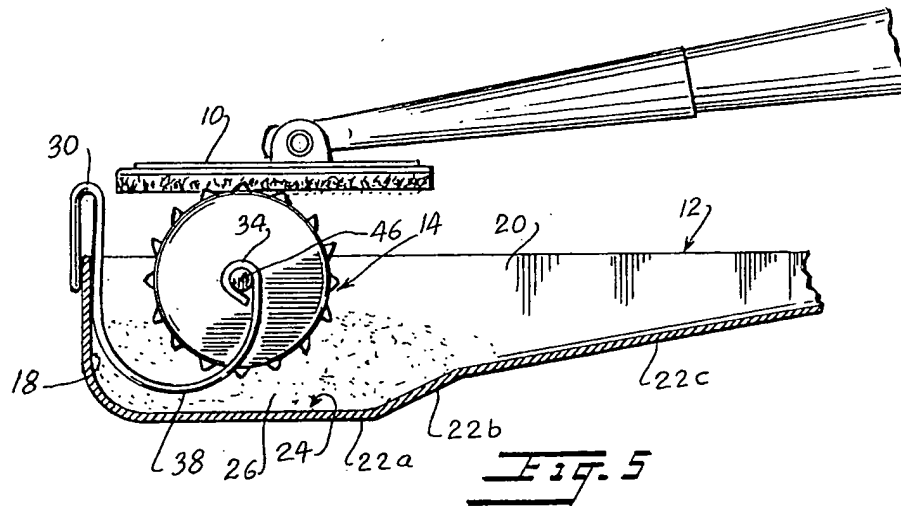
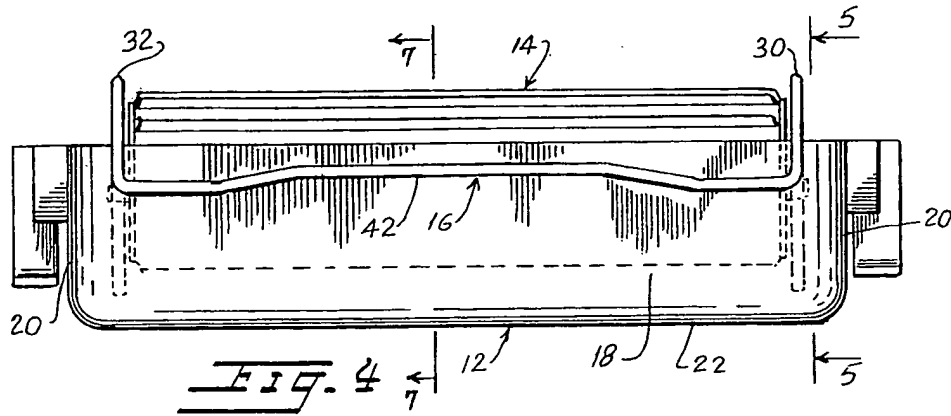
[57] ABSTRACT

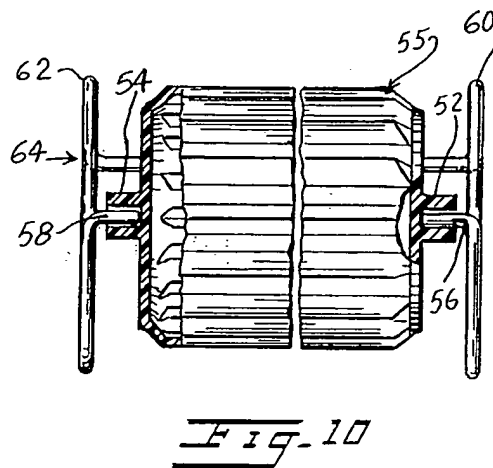
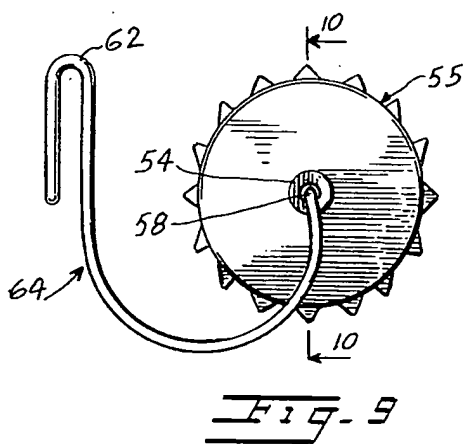
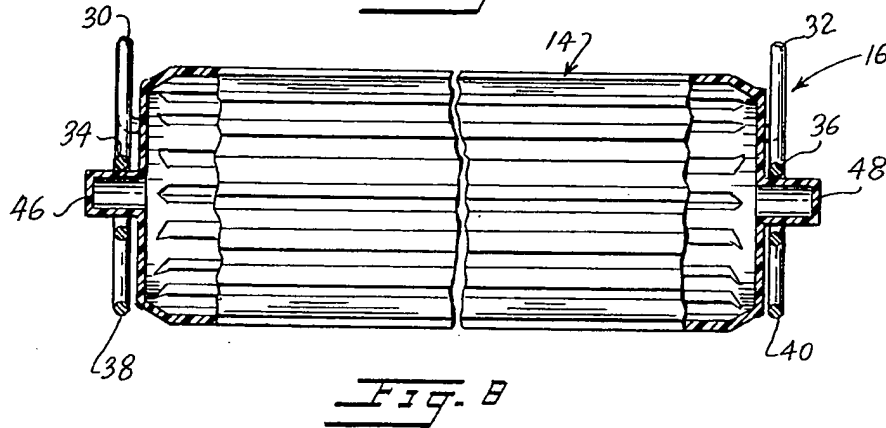
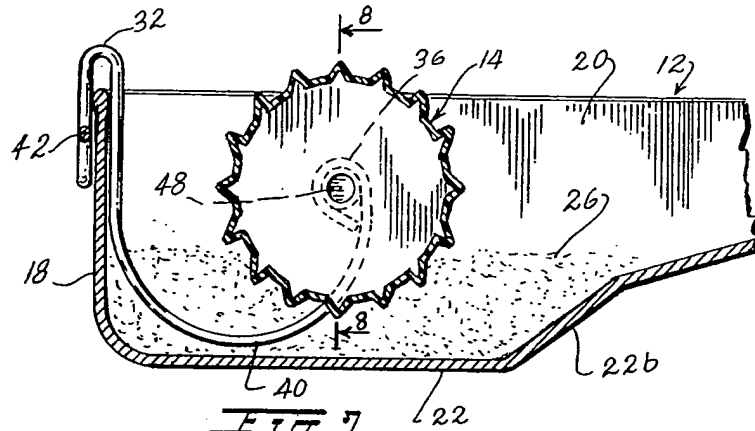
Paint applicator means for applying paint to a pad painter, comprising a conventional paint tray, a paint transfer roller, and mounting means for rotatably supporting the paint transfer roller on the conventional paint tray in partial immersion in the paint contained therein. Paint is applied to the pad painter by moving the pad painter across the paint transfer roller and causing the roller to rotate in the paint, thereby picking up paint from the paint tray and transferring it to the pad painter. The mounting means is adaptable to both deep and shallow well paint trays, and it includes support means for adjustably supporting the paint transfer roller a predetermined distance above the bottom wall of the paint tray, and at selected heights relative to the surface level of the paint.

5 Claims, 10 Drawing Figures









TRAY HAVING PAINT TRANSFER ROLLER FOR PAD PAINTERS

BACKGROUND OF THE INVENTION

1. Field of the Invention

Paint applicators for applying paint to pad painters used in house painting and other applications.

2. Description of the Prior Art

The closest prior patent art known to applicant consists of the following patents:

2,994,901 Ely
3,079,625 Rasmussen
3,100,313 Ernst
3,135,000 Rasmussen
3,648,322 Meisner

The closest of these patents is Meisner, but this patent requires a special paint tray (called a paint "trough") and a cover therefor (called a "painting tool receiving tray having an elongated window therein overlying the trough and supported thereby"). Paint is applied to a pad painter by passing the pad painter across a roller which picks up paint from the trough and transfers through the window to the pad painter. There is no teaching in Meisner, or in any of the other prior art patents, of means for applying paint to a pad painter from a conventional paint tray (sometimes called a "paint roller tray").

SUMMARY OF THE INVENTION

The present invention provides convenient and effective means, including a conventional paint tray, for applying paint to pad painters. More specifically, the invention comprises an assembly consisting of a paint tray normally used to apply paint to paint rollers, a paint transfer roller, and mounting means for rotatably supporting said paint transfer roller on said paint tray.

The mounting means includes vertically elongated hook-shaped brackets or clips adapted to fit the high and low end walls of both deep and shallow well paint trays. The mounting means also includes looped supports for the bearing elements on which the paint transfer roller is rotatably mounted. These looped supports are engageable with the bottom wall of the paint tray to support the paint transfer roller in an elevated position sufficient for clearance above said bottom wall.

The paint transfer roller is provided with paint pickup and collecting means or configurations. In the preferred form of the invention, spaced longitudinal ribs are formed on the roller, defining longitudinally extending channels between them. The ribs function as pickup means for removing the paint from the tray; the channels function as transient paint retention means to carry the paint into contact with the pad painter.

The mounting means, in its preferred form, comprises a wire frame having a pair of hook-shaped bracket or clip elements in the back, and a pair of bearing elements in the front. The hook-shaped clip elements consist of horizontally connected, vertically elongated hook elements which may be slipped over or snapped onto the back wall of the paint tray. The elongated configuration of the hook elements makes it possible to raise or lower the wire frame relative to the bottom wall of the paint tray. The bearing elements support the paint transfer roller for rotation while partially submerged in the paint which is contained in the paint tray. Raising or lowering the wire mounting frame raises or lowers the paint transfer roller relative to the surface level of the paint.

Connecting the hook-shaped clip elements with the bearing elements are wire loops which are engageable with the bottom wall of the paint tray to help support the paint transfer roller in an elevated position, preventing it from rubbing against said bottom wall.

In the use of this device, a standard pad painter is moved across the paint transfer roller, thereby causing said roller to rotate in the paint and to carry the paint into contact with the pad painter. This means provides a simple and effective way to transfer paint from a conventional paint tray to the pad painter.

DESCRIPTION OF THE DRAWING

FIG. 1 is an exploded, perspective view of a paint applicator for pad painters made in accordance with the present invention, said view including a conventional paint tray used therewith.

FIG. 2 is a perspective view showing the paint applicator assembled with the paint tray.

FIG. 3 is a fragmentary plan view of said assembly, showing a pad painter (in phantom view) in operative position relative to the paint transfer roller.

FIG. 4 is an end view of said assembly.

FIG. 5 is a fragmentary vertical section on the line 5—5 of FIG. 4, showing a pad painter in operative position across the paint transfer roller.

FIG. 6 is a fragmentary vertical section similar to that of FIG. 5 but showing the paint transfer roller mounted at a lower elevation relative to the bottom wall of the paint tray.

FIG. 7 is an enlarged, fragmentary vertical section on the line 7—7 of FIG. 4.

FIG. 8 is a fragmentary transverse section on the line 8—8 of FIG. 7.

FIG. 9 is an end view of a modified form of paint transfer roller and mounting means therefor.

FIG. 10 is a fragmentary vertical section on the line 10—10 of FIG. 9.

DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

With reference to the first form of the invention as illustrated in FIGS. 1-8 of the drawing, it will be seen that paint may be applied to pad painter 10 by means of the following paint applicator assembly: a conventional paint tray 12 (sometimes called a "paint roller tray" because it is generally used in conjunction with paint rollers), a paint transfer roller 14, and wire (or other) mounting means 16 to support said paint transfer roller on said paint tray.

The paint tray has an end wall 18, side walls 20, and a multi-level bottom wall 22, including a lower level 22a, a sloping section 22c, and a connecting section 22b. A paint trough 24 is defined by walls 18 and 20 and bottom wall sections 22a, 22b. This is a conventional paint tray construction and it should be understood that the invention is equally applicable to other conventional paint tray constructions.

Mounting means 16 is adapted to be attached to end wall 18 of the paint tray. This mounting means comprises a pair of hook-shaped bracket or clip elements 30, 32, a pair of bearing elements 34, 36, and a pair of arcuate arms 38, 40 which interconnect bracket elements 30 and 32 with bearings 34 and 36 respectively. A cross member 42 interconnects hooks 30 and 32. Clips 30, 32, bearings 34, 36, arms 38 and 40 and cross-member 42 are all integral with each other, formed of a single wire.

It will be noted that hook-shaped bracket elements 30, 32 are vertically elongated. This enables them to be adjustably mounted on end wall 18 of the paint tray. There is sufficient tension in these hook-shaped clip elements to cause them to clip onto said end wall at selected positions thereon. The lowermost position of the transfer roller is determined by looped arms 38, 40 which function as limit elements when they engage the bottom wall of the paint tray, preventing said roller from rubbing against said wall. The vertical elongation of the hook-shaped bracket elements enables them to accommodate end walls of different heights while enabling the looped arms to rest against the bottom wall of the paint tray.

Bearing elements 34, 36 define a pair of eyes which are adapted to receive trunnions 46, 48. Spring tension in the wire frame that comprises mounting means 16 enables arms 38 and 40 to snap eyes 34, 36 into engagement with said trunnions. Transfer roller 14 is thereby rotatably supported by said mounting means for rotation in the paint.

It will be observed that longitudinally extending ribs are formed on the circumferential surface of said transfer roller. These ribs serve to pick up paint from the paint tray as the roller is rotated therein, and the channels which are formed between the ribs function as paint receptacles to carry the paint into contact with the pad painter 10. The paint is thereby transferred to the pad painter for conventional use.

A modified form of the invention is shown in FIGS. 9, 10 and it will there be seen that the only variation from the first form of the invention resides in the bearing means for supporting the transfer roller. In the modified form, coaxial socket bearings 52, 54 are provided on the ends of transfer roller 55 to receive stud shafts 56, 58 which are formed at the ends of arcuate arms 60, 62 of mounting means 64. These stud shaft ends substitute for eyes 34, 36 of the first form of the invention. In all other respects the two forms of the invention are identical and common parts have common reference numbers.

The foregoing is illustrative of preferred forms of the invention and it will be understood that variations and modifications thereof are intended to be encompassed within the scope of the appended claims. For example, the proportions of the parts shown in the drawing may be changed to adapt the invention to paint trays of different configuration and different proportions from those illustrated in the drawing. Also materials may vary, as desired. In the preferred forms of the invention the mounting means is made of metal wire, e.g., steel wire, but the mounting means may also be made of other materials such as plastics.

I claim:

1. A paint applicator for applying paint to a pad painter, said paint applicator comprising:
 - a. a paint tray having end, side and bottom walls defining a paint trough,
 - b. a paint transfer roller, and
 - c. mounting means for rotatably supporting the paint transfer roller on the paint tray for partial immersion in paint contained therein,
 - d. whereby moving the pad painter across the paint transfer roller causes said roller to rotate in contact

with the paint and to transfer the paint from the paint tray to the pad painter,

- e. said mounting means comprising a pair of interconnected hook-shaped clip elements which are adapted to be hooked onto the end wall of the paint tray, a pair of bearing elements which are adapted to support the transfer roller, and a pair of support arms extending from the clip elements and supporting the bearing elements,
- f. said paint transfer roller being journaled to said bearing elements, portions of the support arms extending below the roller,
- g. the hook-shaped clip elements being vertically elongated to adjustably support said paint transfer roller on end walls of different heights formed on paint trays having paint wells of different depths,
- h. the vertical dimensions of said hook-shaped clip elements being sufficient to enable the said portions of the support arms to engage the bottom wall of the paint tray,
- i. thereby preventing said paint transfer roller from rubbing against said bottom wall when rotated by the pad painter,
- j. said hook-shaped clip elements being vertically slidable on the end walls to raise or lower the paint transfer roller relative to the surface level of the paint in the paint well,
- k. thereby controlling the depth of immersion of the paint transfer roller in the paint.

2. A paint applicator in accordance with claim 1, wherein:

- a. the paint transfer roller is provided with longitudinally extending circumferentially spaced ribs defining longitudinal channels between them,
- b. said ribs being adapted to pick up the paint from the paint tray as the roller is rotated therein by the pad painter,
- c. whereby the paint is collected within the channels and applied to the pad painter.

3. A paint applicator in accordance with claim 1, wherein:

- a. the paint tray has an end wall, a pair of side walls, and a bottom wall connected to said end and side walls,
- b. a paint trough being formed between said end, side and bottom walls,
- c. said mounting means being positioned on the paint tray to support the paint transfer roller in said trough for immersion in paint contained therein.

4. A paint applicator in accordance with claim 3, wherein:

- a. the bearing elements comprise a pair of coaxial eyes,
- b. the paint transfer roller being provided with a pair of coaxial end trunnions which are journaled into said coaxial eyes to rotatably support said paint transfer roller in the paint trough of the paint tray.

5. A paint applicator in accordance with claim 3, wherein:

- a. the bearing elements comprise a pair of coaxial pin elements,
- b. the paint transfer roller being provided with a pair of coaxial socket bearings into which said coaxial pin elements are journaled to rotatably support said paint transfer roller in the paint trough of the paint tray.

* * * * *



US005314061A

United States Patent [19]

Bedrossian

[11] Patent Number: 5,314,061

[45] Date of Patent: May 24, 1994

[54] PAINT BUCKET WITH INNER PAINT IMPLEMENT ATTACHING MEANS

[76] Inventor: Verelk Bedrossian, 4324 8e Rue, Chomedey, Laval, Quebec H7W 2A1, Canada

[21] Appl. No.: 63,664

[22] Filed: May 20, 1993

[51] Int. Cl.⁵ B65D 69/00

[52] U.S. Cl. 206/229; 206/15.2; 206/15.3; 220/697; 220/735; 220/736

[58] Field of Search 206/229, 15.2, 15.3; 220/697, 700, 735, 736, 521; 229/1.5 C

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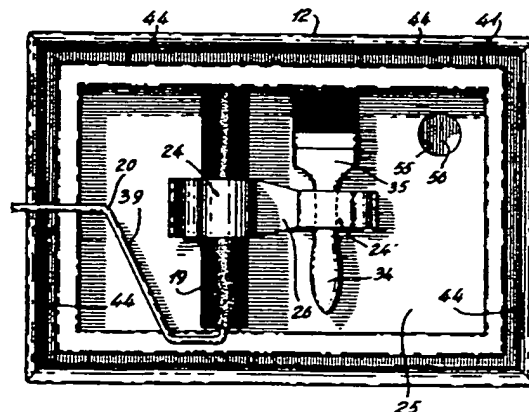
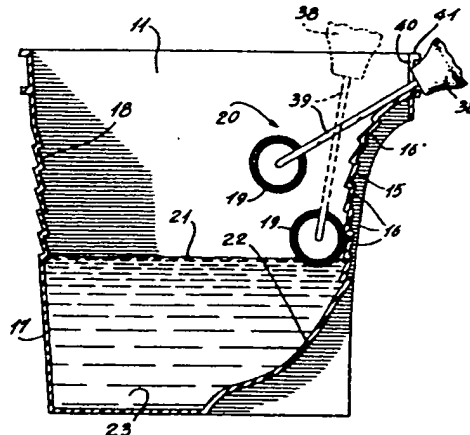
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Primary Examiner—David T. Fidei

[57] ABSTRACT

A paint bucket comprised of an open-top-end container. A lid is engageable over the open-to-end. The lid is provided with attachment brackets on an inner surface thereof for the retention of one or more paint applying implements. A slot is formed in a top end of the bucket for accommodating passage of a paint roller connecting rod whereby a wet paint roller may be held inside the container connecting rod and handle extending outside the container to maintain the wet roller in an enclosed area to prevent the wet roller from drying, when not in use.

7 Claims, 3 Drawing Sheets



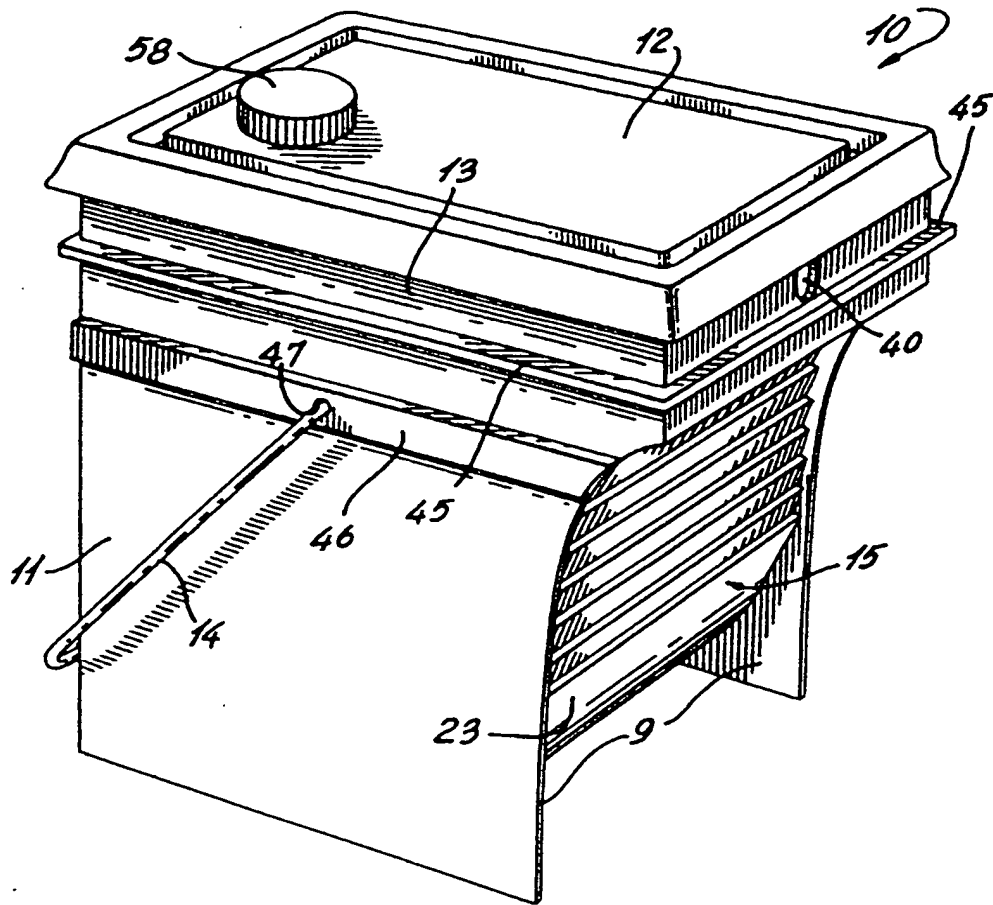
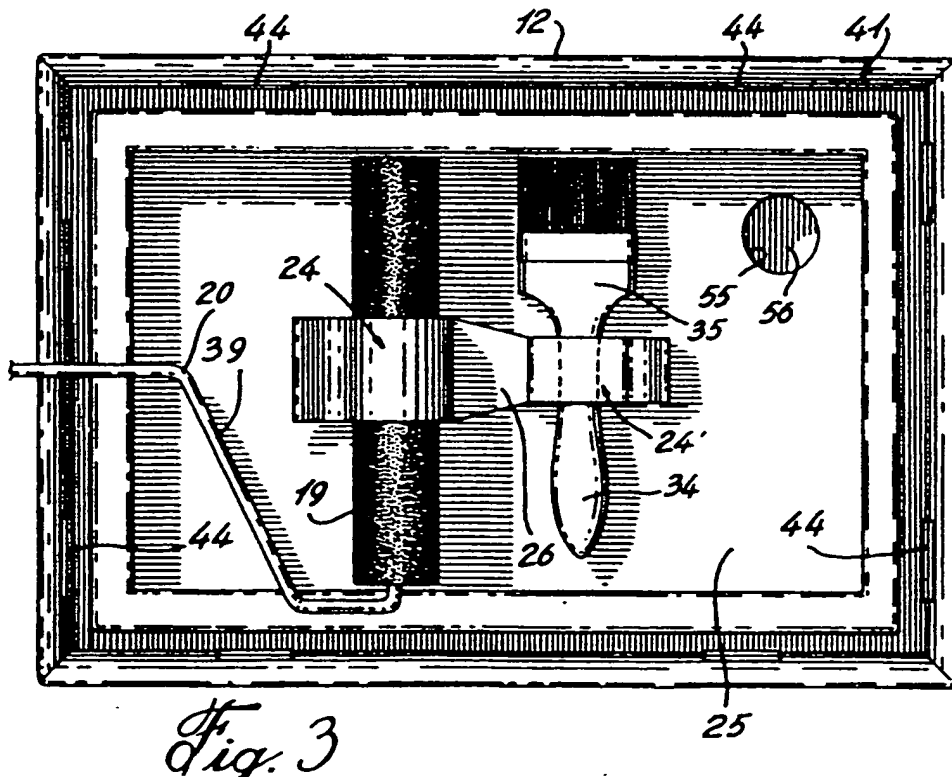
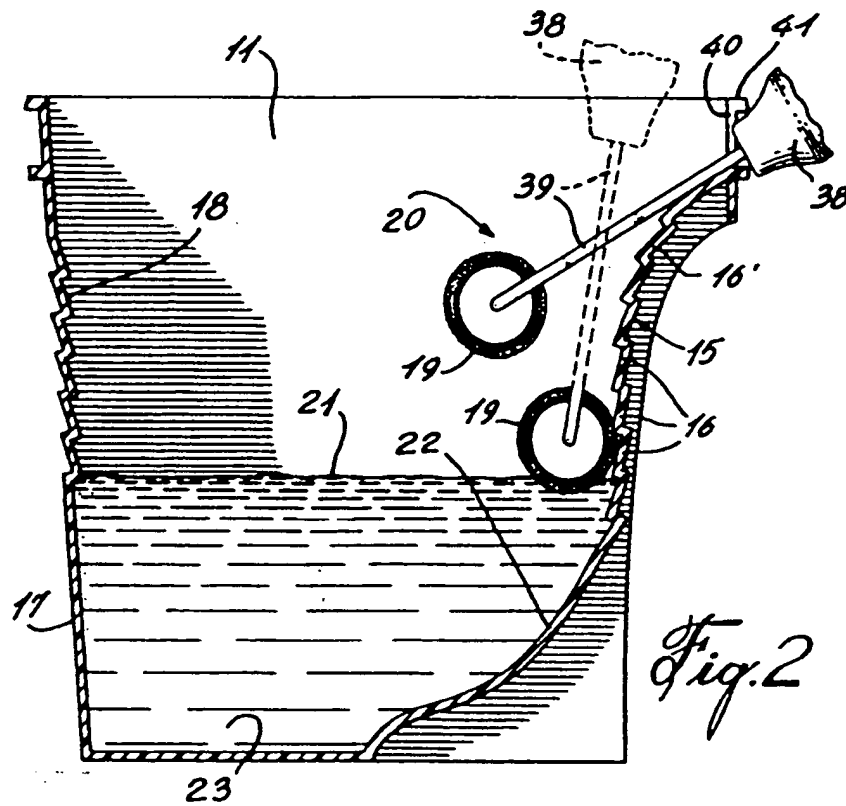


Fig. 1



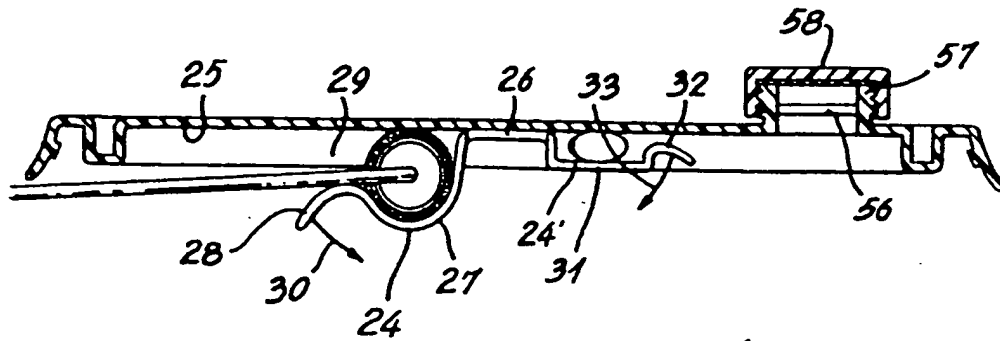


Fig. 4

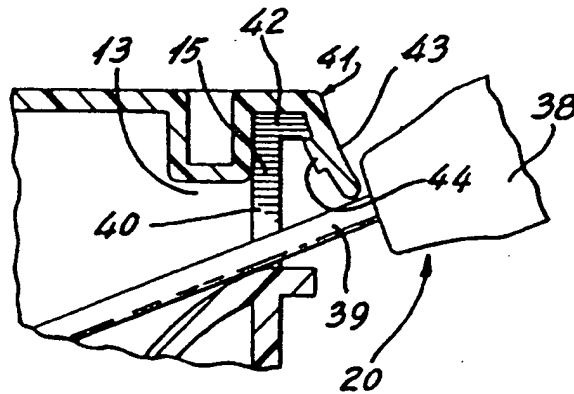


Fig. 5

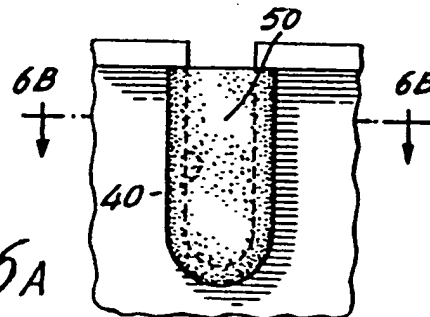


Fig. 6A

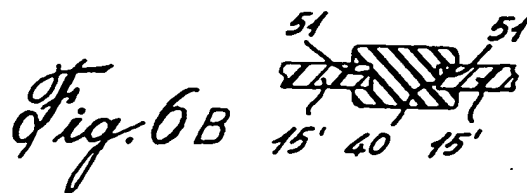


Fig. 6B

PAINT BUCKET WITH INNER PAINT IMPLEMENT ATTACHING MEANS

BACKGROUND OF INVENTION

1. Field of the Invention

The present invention relates to a paint bucket comprised of an open-top-end container having a lid with attachment brackets disposed on a rear face of the lid to retain paint applying implements thereagainst and wherein the paint bucket has a slot in a top edge thereof for the passage of a paint roller connecting rod whereby a wet roller may be stored inside the container to prevent drying thereof.

2. Description of Prior Art

It is known in the prior art to provide paint buckets having a ribbed wall surface formed with the bucket whereby to remove excess paint from a roll applicator brush rolled thereagainst. This is disclosed in U.S. Pat. No. 2,988,767. However, with such buckets there is a need to remove paint from the bucket in order to use the ribbed side wall as the paint in the bucket, when full, conceals this ribbed side wall. It is therefore necessary to have another bucket to store paint while the bucket with the flat ribbed wall is utilized. U.S. Pat. No. 2,983,938 also discloses a paint bucket wherein a roller-type paint applicator is inserted within the container, which is filled with paint, through a small cylindrical orifice and then withdrawn therefrom and during this withdrawing process a plurality of circumferential serrations will be in doctoring contact with the peripheral surface of the roller brush to remove excess paint. The purpose of this device is to eliminate the need to use paint pans which need to be constantly refilled due to their small capacity size. It also eliminates the need to clean the paint pan.

There is, however, another need for storing wet paint applying implements, such as rollers or paint brushes, to prevent them from becoming dry when there is a pause in the applying of paint for a substantial period of time. When wet paint implements are left uncleaned and exposed to air they dry out. This need to prevent wet paint implements from drying also eliminates the need to have to clean the paint implements each time there is a lengthy pause. Often paint implements have to be left wet for a substantial length of time.

There is a further need to provide a paint bucket which will also serve as a paint tray but without having to remove paint from within the bucket for access to a ribbed surface of the paint bucket whereby excess paint from a roller-type paint applicator can be removed.

SUMMARY OF INVENTION

It is a feature of the present invention to provide a paint bucket which overcomes the above mentioned disadvantages of the prior art and fulfills the required needs as stated hereinabove.

Another feature of the present invention is to provide a paint bucket which has a lid with attachment means on an inner surface of the lid for retaining one or more paint applying implements.

Another feature of the present invention is to provide a paint bucket having a flat curved inner flat side wall portion with a plurality of spaced transverse ribs in a top portion thereof to remove excess paint from a roller-type paint applying implement without the need of

having to remove paint from the bucket for access to the ribbed wall.

Another feature of the present invention is to provide a paint bucket having a cover having retention means in an inner surface thereof and capable of retaining a wet paint applying roller or brush within the container when the lid is closed to prevent the roller or brush from drying.

According to the above features, from a broad aspect, the present invention provides a paint bucket comprising an open-top-end container having a lid engageable over the top end of the container. Attachment means are provided on an inner surface of the lid for the retention of one or more paint applying implements.

According to the above features, from another broad aspect, the present invention further provides a through slot in the top end of the bucket for accommodating passage of a paint roller connecting rod whereby to retain a wet roller within the container to prevent drying therefrom and with a portion of the connecting rod and handle of the roller extending through the through slot and disposed exteriorly of the container.

DESCRIPTION OF DRAWINGS

A preferred embodiment of present invention will now be described with reference to the accompanying drawings in which;

FIG. 1 is a perspective view of the paint bucket of present invention;

FIG. 2 is a transverse section view of the open-top-end container;

FIG. 3 is a plan view of the rear face of the lid;

FIG. 4 is a cross-section view through the lid;

FIG. 5 is an enlarged view showing the connection of the lid with the open-top-end container and the through slot formed in a side wall of the lid;

FIG. 6A is a plan view of a plug for closing the slot in the side wall of the container; and

FIG. 6B is a cross-section view of FIG. 6A.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to the drawings and more particularly to FIGS. 1 and 2, there is shown the paint bucket 10 of the present invention and it comprises essentially an open-top-end container 11 of substantially rectangular or square cross section and having a lid 12 engageable over a top end 13 thereof. The container or bucket 11 is provided with a U-shaped bail 14 for transporting the bucket. As herein shown the rear side wall 15 of the bucket is curved and as shown in FIG. 2 is provided with a plurality of spaced-apart transverse ribs 16 in at least a top curved portion thereof.

As shown in FIG. 2 the opposed side wall 17 may also be provided with equidistantly spaced transverse ribs 18 in a top portion thereof for the same purpose as are the ribs 16 on the opposed curved side wall 15 and namely to remove excess paint from a paint roller-type applicator 20 by moving the roller 19 back and forth over these ribs, in a manner well known in the art. The rear curved side wall 15 has a specific shape which permits the paint bucket of present invention to be utilized with a substantial amount of paint inside the container 11 and this is achieved by having the top part of the side wall 15 curved outwardly such that the top ribs, herein ribs 16', are accessible close to the top of the container. These ribs 16' are in quantities would be sufficient to remove excess paint from the roller 19

when the container is filled to capacity to the level indicated at 21. The curved wall portion 22 below the ribbed portion 16 has a concave curve whereby to direct paint to the bottom area 23 when paint is removed by the transverse ribs. It also permits the roll 19 to be rolled thereon when picking up paint from the top level of the paint such as at 21', as it diminishes towards the bottom area 23 and also permitting substantial removal of all of the paint within the bucket. Accordingly, with the construction of this bucket there is no need to utilize conventional paint trays nor to transfer paint to other buckets.

An important feature of present invention is illustrated in FIG. 3 and that is the provision of attachment brackets 24 and 24' within the inner surface 25 of the lid 12, as more clearly shown in FIG. 4. The bracket 24 is a clip-like bracket having a secured end 26 secured to the inner surface 25 of the lid 12, an arcuately shaped elevated intermediate portion 27 and an end lipped portion 28 held elevated from the inner surface 25. The shape of the attachment bracket 24 defines an open mouth 29 through which a paint applicator roll 19 can be introduced causing the bracket 24 to flex upwardly in the direction of arrow 30 and permitting entry of the roll 19 for clamping engagement under the arcuately shaped intermediate portion 27 for the retention thereof, as shown FIG. 3.

The paint brush retention bracket 24' consists of a flat retention wall, 31 closely spaced to the inner surface 25, and having a depending curved lip 32 at a free end thereof whereby to permit the bracket or clip 24' to be hinged outwardly in the direction of arrow 33 to permit the passage of the handle portion 34 of a paint brush 35 for clamping retention against the inner surface 25. Although in FIG. 3 there is shown a roller applying device 20 secured with its roll 19 clamped by the bracket 24, it is pointed out that a spare roll 19 may be retained in the cover. The paint applying device 20 may be suspended within the bucket, as illustrated FIG. 5, through the slot 40 with the cover closed. This will prevent the paint on the roll 19 from drying during short periods of time, for example a few days or a few weeks.

As shown in FIGS. 1, 2 and 5 the slot 40 provided in the top edge 41 of the side wall 15 is for the passage of the connecting rod 39 of the roller applicator 20 with the handle 38 of the applicator disposed outwardly of the container. The slot 40 is dimensioned to permit close fit of the connecting rod 39 therethrough. As shown FIG. 5 the lid 12 is provided with a peripheral locking channel 41 which receives the peripheral ledge 42 of the container 11 therein in friction fit to substantially seal the top end 13 of the container 11. The locking channel 41 has a depending flange 43 which overlaps the ledge 42 and a top portion of the through slot 40. A plurality of tabs 44 are disposed about the locking channel 41 for snap retention with the peripheral ledge 42.

Referring again to FIG. 1 it can be seen that the side walls 9 of the container 11 are substantially rectangular and extend beyond the curved rear side wall 15 to provide proper support for the bucket 10. Furthermore, a peripheral ledge 45 extends about the container 11 and spaced from the open top end thereof to substantially arrest paint that may drip along the outer surface of the side walls when the container is in use. The ridge 45 and the wings 9 further add structural rigidity and support for the container. The container also has a structural

ridge 46 extending in a top end thereof provided with holes 47 for the securement of the bail 14.

In use, the container 10 of the present invention may be sold with a roller-type paint applying implement 20 secured to the inner surface of the lid 12 with the connecting rod 20 of the implement extending through the slot 40. Accordingly, the roll 19 is positioned above the paint level 21 in the container and is usually dry as long as the container is maintained upright. If the bucket is sold as such a rubber or foam seal (plug 50) can be positioned in the slot 40 over the connecting rod 39 of the roller applicator 20 to substantially seal the slot opening 40. When it is necessary to use the paint bucket, the lid is removed and the roller is detached. The roller is then dipped slightly against the paint level 21 and rolled against the uppermost rib 16' to remove excess paint therefrom. The excess paint drips back into the paint reservoir to the level 21. If it is necessary to stop painting there is a requirement to continue to paint after the pause, such as at the end of a day or during lunch breaks, the roller or the paint brushes 35 are clipped to the clamps 24 and 24' in the rear surface of the lid and the lid is positioned over the bucket. Accordingly, the wet paint applying implements will not dry up, will not require cleaning or replacement and are ready for use again within a reasonable delay period.

Referring to FIGS. 6A and 6B there is shown the construction of the sealing plug 50 formed of deformable rubber or foam plastic material whereby to seal the through slot 40 if it is necessary to store the container with paint whereby to seal the opening, whether a roller-type paint applicator is provided or not, to prevent outside air from entering the container. This plug 50 is U-shaped and provided with an intermediate U-shaped channel 51 for sliding fit within the side walls 15' on opposed sides of the slots 40 formed in the top edge of the rear wall of the container. The plug 50 can be placed over the rod 39 of the paint applying device 20 to substantially obstruct the slot opening 40 during use.

As shown in FIGS. 1, 3 and 4, a hole 55 may be provided in the lid 12 and covered with a detachable sealing membrane 56. A threaded peripheral ridge 57 surrounds the hole 55 and extends on the top side of the lid. A screw cap 58 is threadably engaged with the ridge 57. The hole 55 permits the addition of color pigments in the paint within the container to provide a colored paint. A mixing implement is introduced through the hole 55 to mix the pigment in the paint base. This provides for mixing colors at the point of purchase and permits carrying low inventory by placing only a white base paint in the containers, as is well known in the art.

Various modifications of the embodiment of the paint bucket of the present invention are intended to be covered by the present application provided these modifications fall within the interpretation of any of the appended claims. As an example only the through slot 40 formed in the top edge of the rear side wall could also be conceivably be formed in an edge of lid only or both the lid and the side wall. However, it is preferable to have the slot formed in the top edge of the rear wall of the container.

I claim:

1. A paint bucket capable of holding one or more gallons of paint, said bucket comprising an open-top-end container, a lid engageable over said open-top-end, and attachment means on an inner surface of said lid for the retention of one or more paint applying implement, said open-top-end container being a rectangular

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container having opposed parallel flat side walls, at least one said flat side wall having an uppermost side wall portion with a plurality of spaced transverse ribs projecting inwardly in said container to remove excess paint from a roller-type paint applying implement, said side wall portion being an uppermost portion of one of said opposed side walls and being sloped outwardly of said one of said opposed side walls in a top portion thereof, a concavely curved lower section disposed below said uppermost portion and terminating in the direction of an opposed parallel side wall to said one of said opposed side walls, said curved lower section having a flat inner face and directing excess paint disposed between said ribs to a top surface of paint contained in said container, said lid having a peripheral side edge, said side edge having engaging means for sealing engagement with a contour edge of said open-top-end container, a through slot in a top edge of said bucket for accommodating passage of a paint roller connecting rod.

2. A paint bucket as claimed in claim 1 wherein said attachment means is a paint roller clamp for retaining a paint applying roller against said inner surface of said lid.

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3. A paint bucket as claimed in claim 2 wherein said attachment means further comprises a paint brush retention clamp for retaining a paint brush against said inner surface of said lid.

4. A paint bucket as claimed in claim 2 wherein said lid has a through hole therein, a threaded sleeve about said through hole, and a threaded cover threaded about said sleeve.

5. A paint bucket as claimed in claim 1 wherein said open-top-end container defines a flat rectangular bottom wall pan section between said opposed parallel side wall and a straight lower edge of said concavely curved lower section.

6. A paint bucket as claimed in claim 1 wherein said opposed parallel side wall is a straight vertical side wall, a plurality of spaced transverse ribs in a top portion of said opposed parallel side wall, said ribs projecting inwardly in said container to remove excess paint from a roller-type paint applying implement displaced thereon.

7. A paint bucket as claimed in claim 1 wherein said transverse ribs terminate at opposed ends thereof spaced from opposed side edges of said at least one flat side wall portion, and ribs being of substantially pyramidal cross-section.

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(19) **United States**(12) **Patent Application Publication****Keller**(10) **Pub. No.: US 2003/0074760 A1**(43) **Pub. Date: Apr. 24, 2003**(54) **PAINT APPLICATOR SYSTEM****Publication Classification**(75) **Inventor: Russell D. Keller, Vancouver, WA (US)**(51) **Int. Cl.⁷ B05C 17/02**(52) **U.S. Cl. 15/230.11; 15/257.06; 492/13; 492/19**

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(73) **Assignee: RDK Company**(21) **Appl. No.: 10/045,487**(22) **Filed: Oct. 19, 2001**(57) **ABSTRACT**

A paint application system configured for applying paint to the interior surfaces within a gap between spaced-apart boards. The system typically includes a disk, or disks, extending radially from an outer surface of a cylindrical paint roller. Also included may be a paint wring-out device having grooves or slots for squeezing excess paint from the disk, or disks.

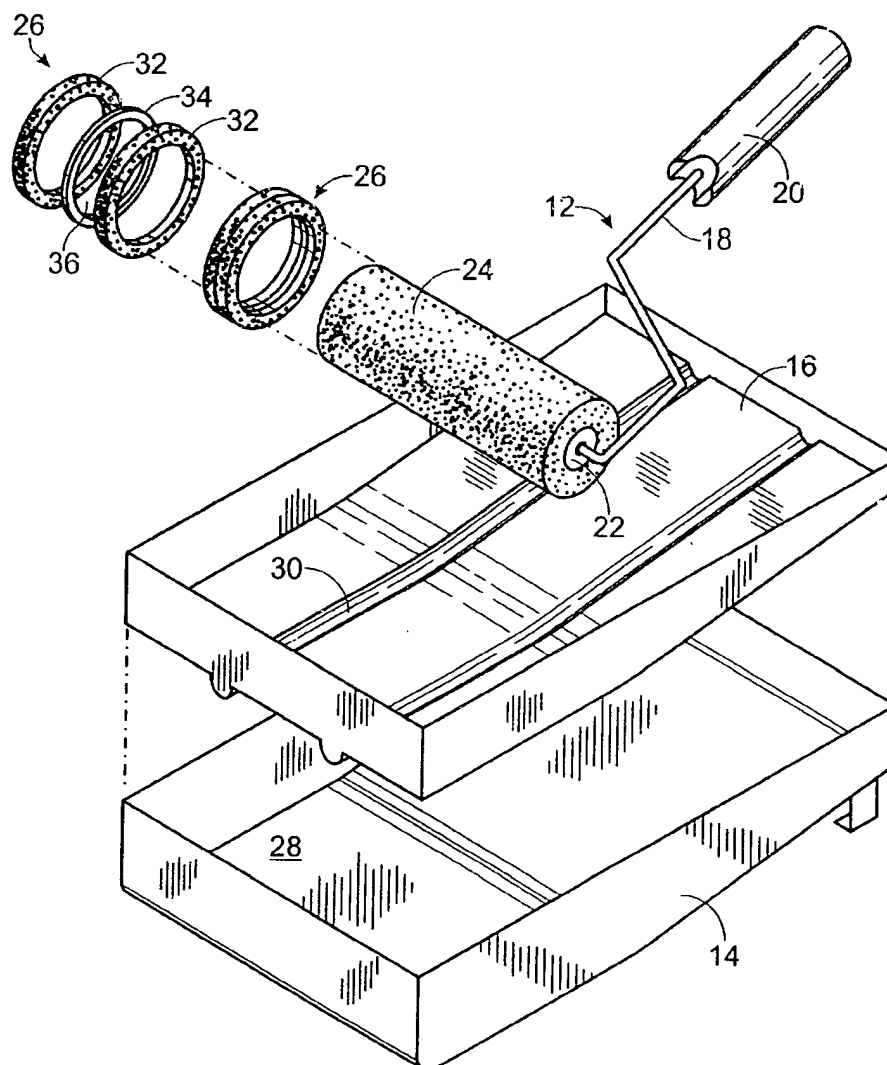


Fig. 1

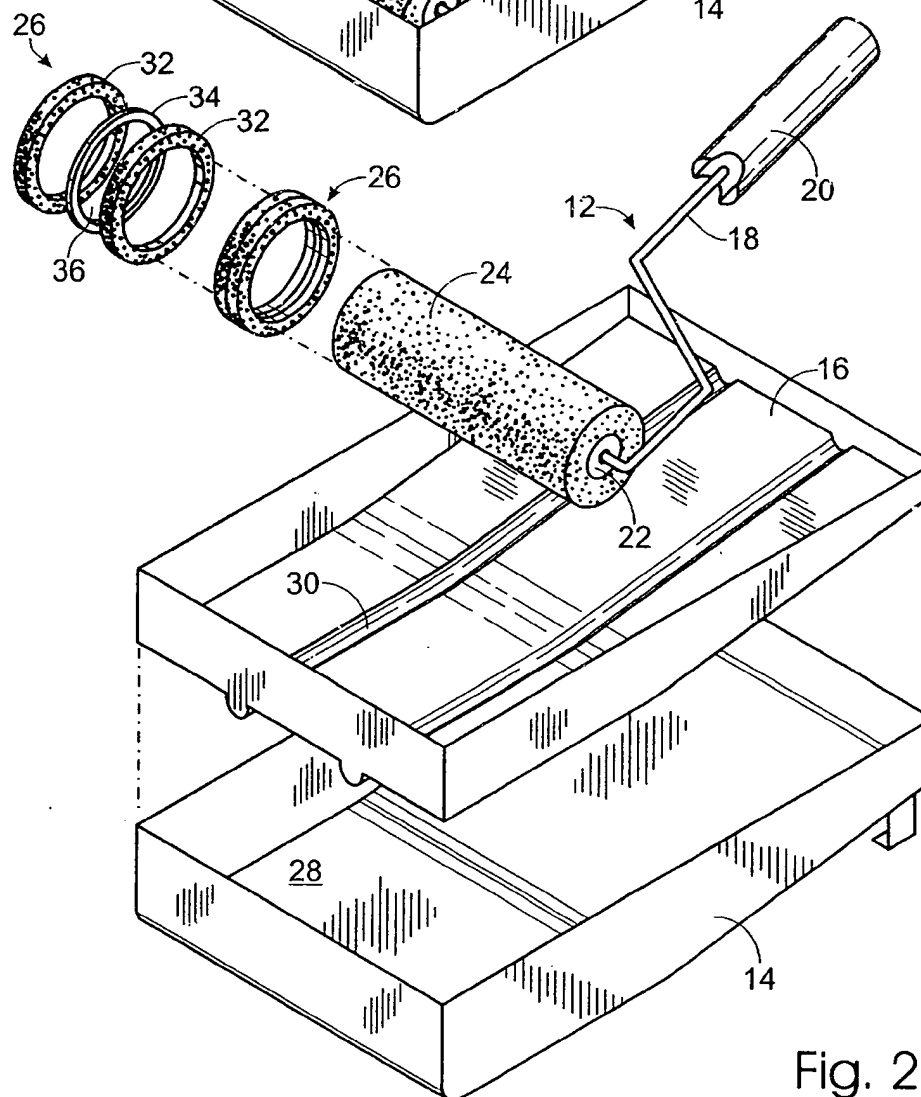
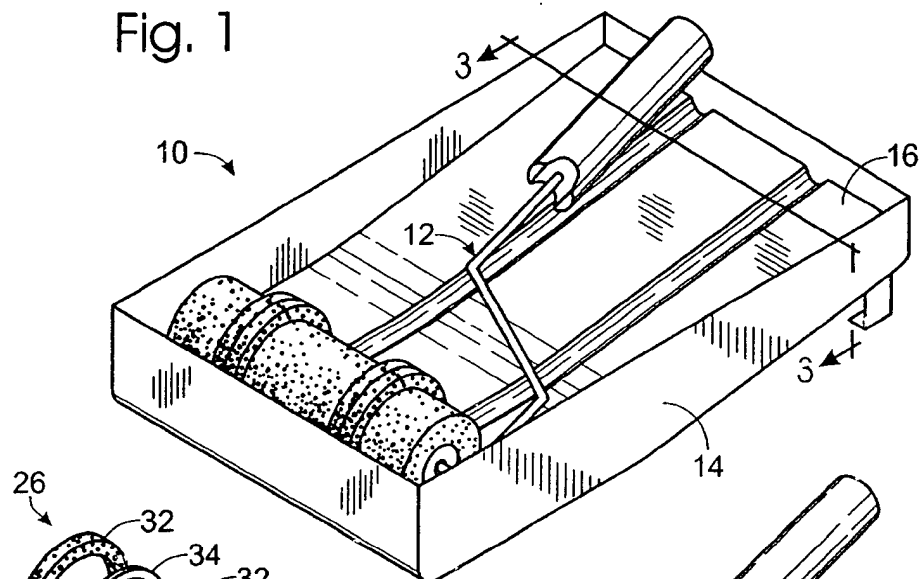


Fig. 2

Fig. 3

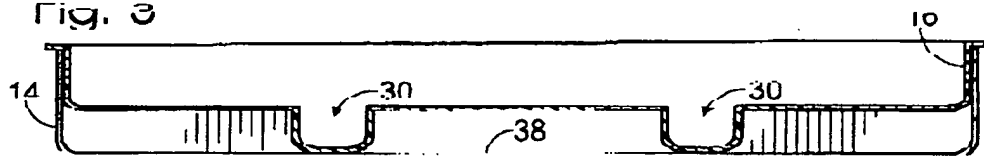


Fig. 4

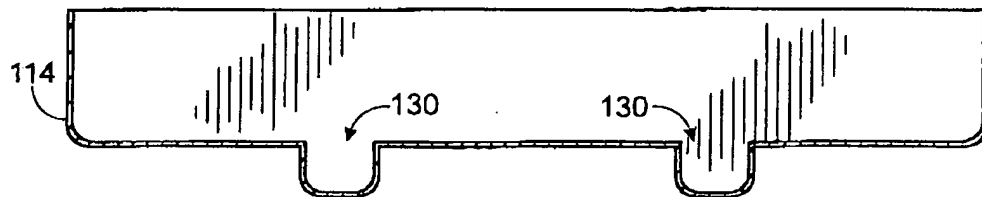


Fig. 5

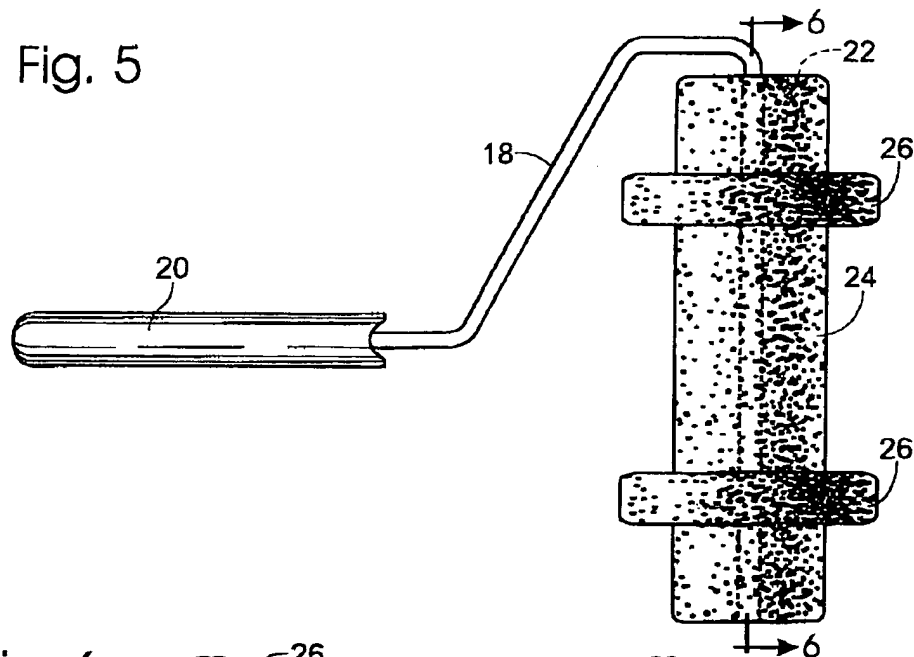


Fig. 6

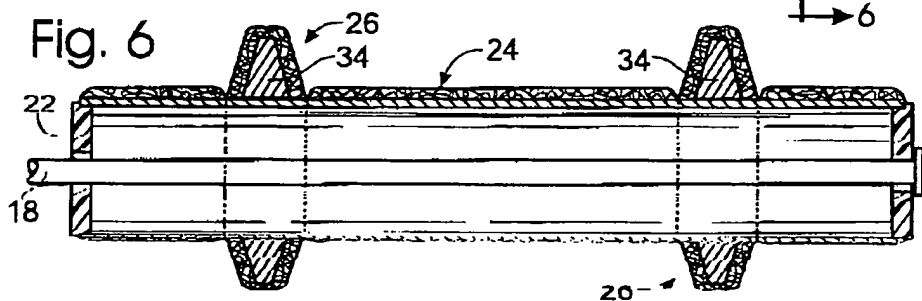


Fig. 7

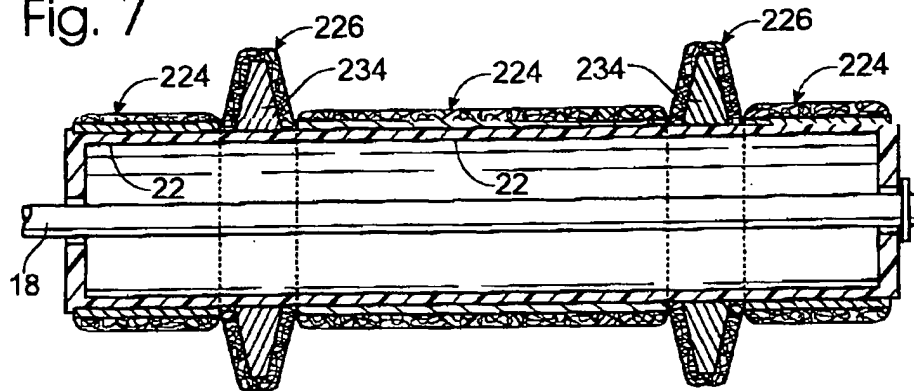


Fig. 8

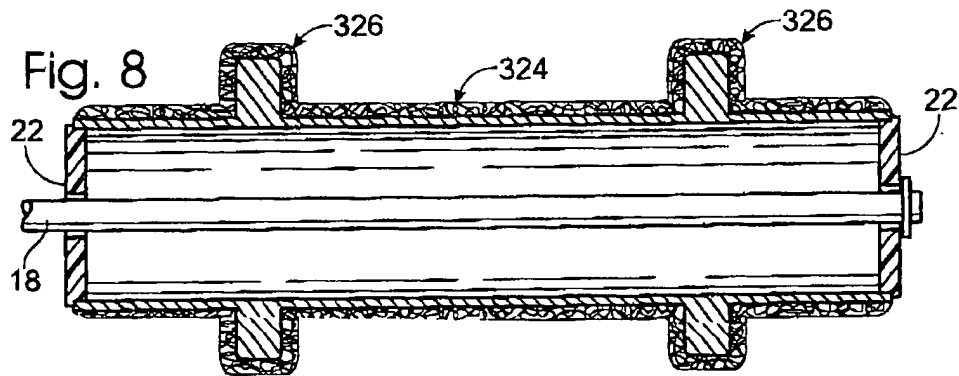


Fig. 9

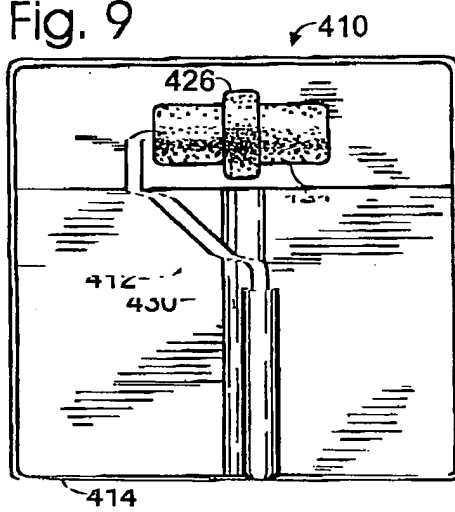


Fig. 10

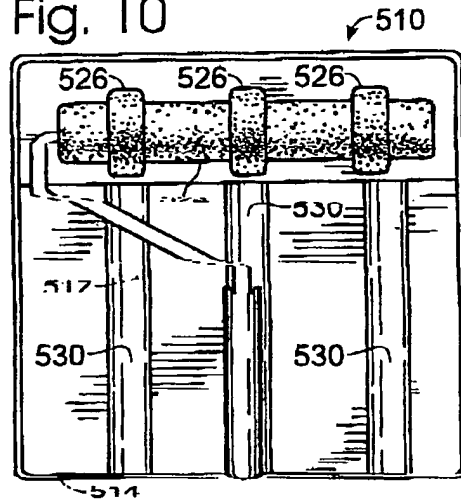


Fig. 11

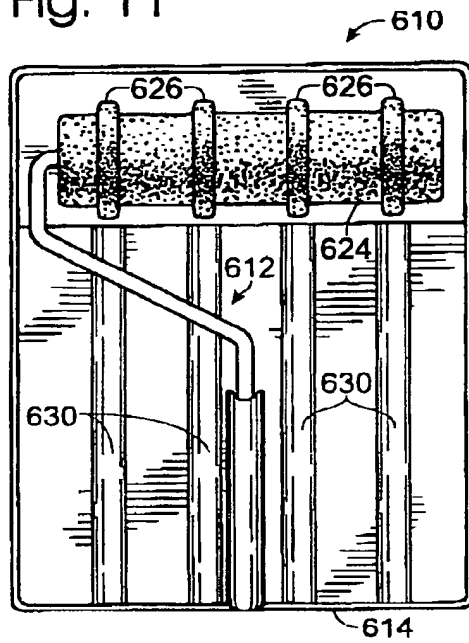


Fig. 12

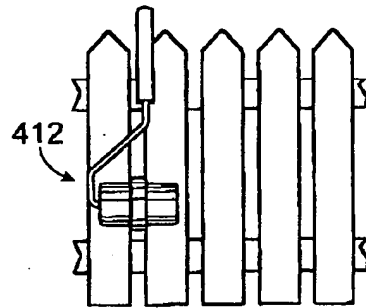


Fig. 13

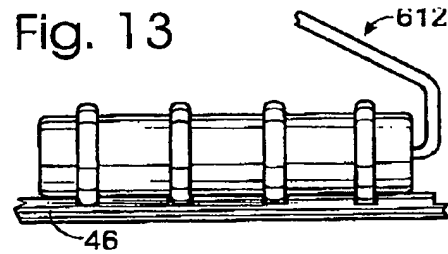


Fig. 14

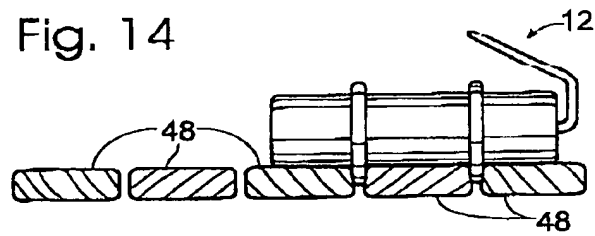


Fig. 15

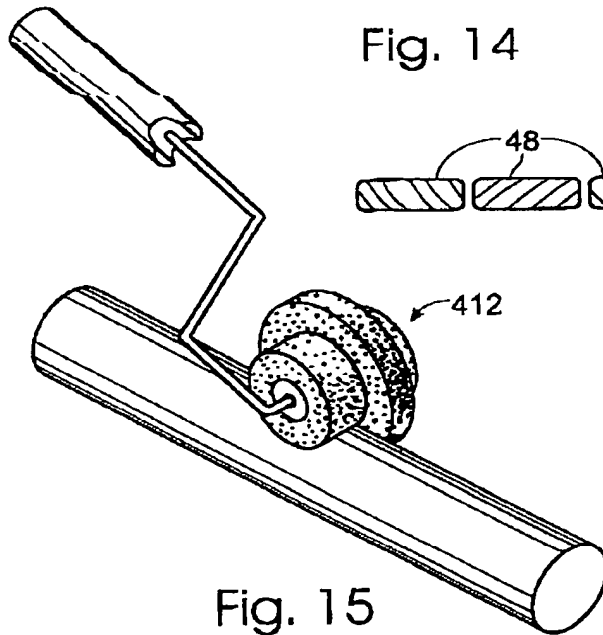


Fig. 16

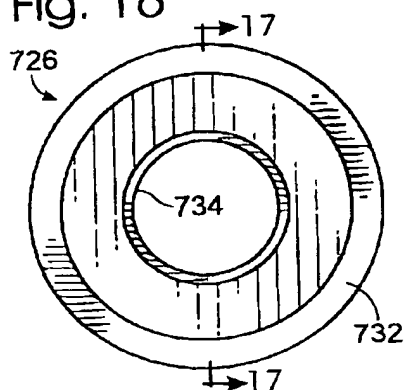


Fig. 17

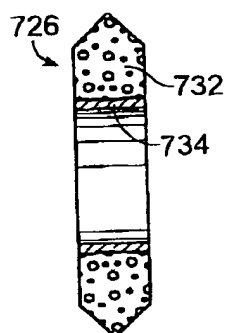


Fig. 18

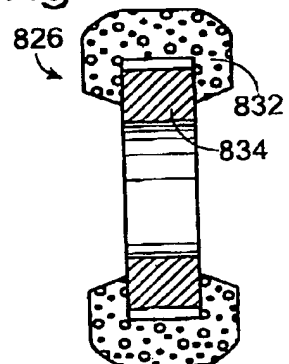


Fig. 19

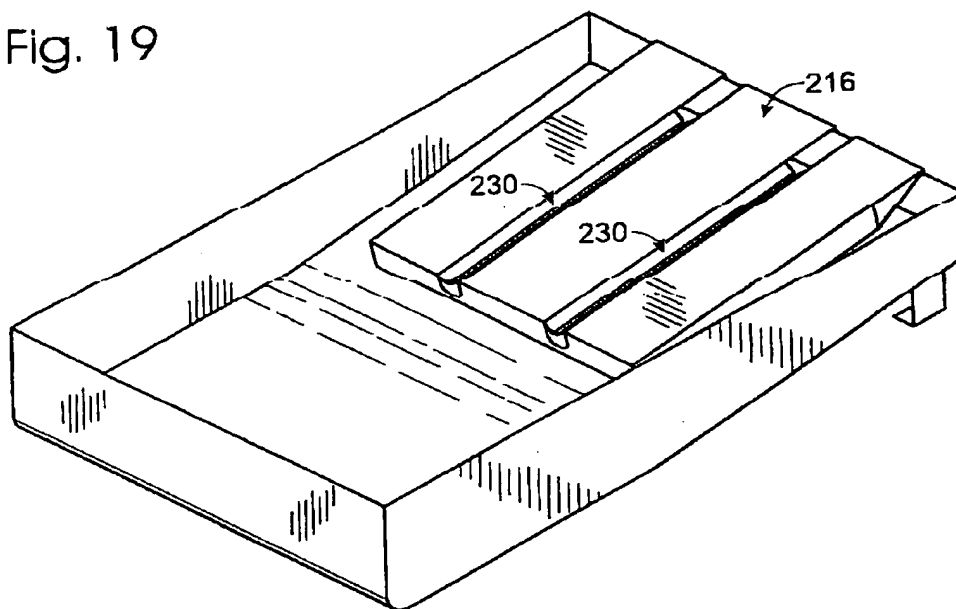
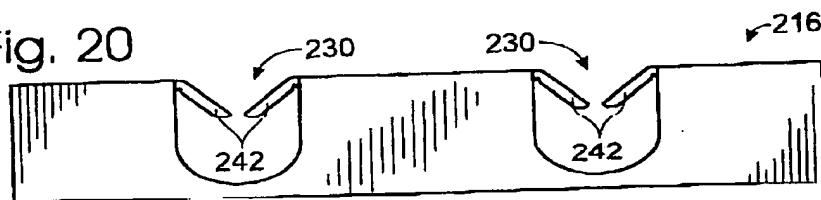


Fig. 20



PAINT APPLICATOR SYSTEM

FIELD OF THE INVENTION

[0001] The present invention relates to an apparatus for applying paint to surfaces within a gap between spaced-apart boards.

BACKGROUND OF THE INVENTION

[0002] Devices for applying paint to a surface and into corners have been known for many years. The need for applying paint quickly and with minimum effort to large areas led to the development of paint rollers. Paint rollers have the advantage of being able to apply a wide swath of paint, reducing the time needed to paint a large surface, such as an interior wall.

[0003] However, paint rollers are not well suited for applying paint to irregular surfaces, particularly, surfaces having small radius curves, gaps, ribs, or crevices. For example, it is desirable to be able to apply paint to a fence or deck where adjacent boards are spaced apart at regular intervals. Rollers may be used to apply paint to the exposed surface of adjacent boards, but cannot be used to apply paint to the two facing surfaces of spaced-apart boards. Previously, to apply paint within such a gap required a conventional hand brush, which was very labor intensive. Therefore, it would be desirable to provide a paint applicator system for applying paint to both the exterior surface as well as the surfaces within the gap between spaced-apart boards in a less labor-intensive manner.

SUMMARY OF THE INVENTION

[0004] A paint application system for applying paint to the interior surfaces within a gap between spaced-apart boards. The system typically includes at least one disk extending radially from an outer surface of a cylindrical paint roller, a paint-carrier material covering the disk. A paint wring-out device may also be included. That device would typically have at least one groove or slot for squeezing excess paint from the disk.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is an isometric view of a paint application system according to one embodiment of the present invention including a roller application and a roller paint pan having a liner adapted to work with the roller.

[0006] FIG. 2 is an exploded isometric view of the paint application system of FIG. 1.

[0007] FIG. 3 is an end elevation sectional view of the paint pan and tray insert pan liner adapted to work with the roller applicator of FIG. 1, taken along line 3-3 of FIG. 1.

[0008] FIG. 4 is an end elevation sectional view corresponding to FIG. 3, except that FIG. 4 depicts a second embodiment of a paint pan adapted to work with the roller applicator of FIG. 1.

[0009] FIG. 5 is a top plan view of the roller applicator of FIG. 1.

[0010] FIG. 6 is a sectional view of the roller of the roller applicator of FIG. 5, taken along line 6-6 of FIG. 5, showing the construction of the roller with disks configured to slide over the roller.

[0011] FIG. 7 is a sectional view corresponding to FIG. 6, except that FIG. 7 depicts an alternate embodiment of the roller disk where the disks are formed integrally with the roller.

[0012] FIG. 8 is a sectional view corresponding to FIG. 6, except that FIG. 8 depicts a second alternate embodiment of a roller and disks, showing the disks sandwiched between adjacent roller segments.

[0013] FIG. 9 is a top plan view of a paint application system according to another embodiment of the present invention, having a shortened roller and a single disk.

[0014] FIG. 10 is a top plan view of a paint application system according to another embodiment of the present invention, having a standard roller and three disks.

[0015] FIG. 11 is a top plan view of a paint application system according to another embodiment of the present invention, having a standard roller and four disks.

[0016] FIG. 12 is a schematic view of a roller applicator according to one of the embodiments of the present invention, shown applying paint to a picket fence.

[0017] FIG. 13 is a schematic view of a roller applicator according to one of the embodiments of the present invention, shown applying paint to a sheet of T-11 siding.

[0018] FIG. 14 is a schematic view of a roller applicator according to one of the embodiments of the present invention, shown applying paint to the adjacent boards of a deck.

[0019] FIG. 15 is an isometric view of a roller applicator according to one of the embodiments of the present invention, shown applying paint to a cylindrical railing.

[0020] FIG. 16 is a side view of a disk adapter according to one embodiment of the present invention.

[0021] FIG. 17 is a cross-sectional view of the adapter of FIG. 16 taken along line 17-17 of FIG. 16.

[0022] FIG. 18 is a cross-sectional view of another embodiment of a disk adapter according to one embodiment of the present invention.

[0023] FIG. 19 is an isometric view of a paint pan and wring-out insert tray according to one embodiment of the present invention.

[0024] FIG. 20 is an end view of the wring-out insert tray of FIG. 19.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0025] In FIG. 1, a preferred embodiment of a paint application system according to the present invention is indicated generally at 10. The paint application system includes a paint applicator 12, a paint roller pan 14, and a tray insert 16, shown in FIG. 2. Roller applicator 12 is configured to apply paint to exterior surfaces, and interior surfaces within a gap or crevice, as will be explained further below. Paint roller pan 14 holds paint for loading paint onto applicator 12. Tray insert 16 removes excess paint from applicator 12.

[0026] Roller applicator 12 includes a frame 18 configured to support a handle 20 and a roller-carrier structure 22. Handle 20 permits a user to manipulate applicator 12.

Roller-carrier structure 22 supports a paint roller 24 and is configured to rotate about an axis, as will be explained in detail below. Paint roller 24 is generally cylindrical in shape and may be configured to support adapter disks 26.

[0027] Adapter disks 26 may be configured to slide over roller 24 and be positioned along the length of the roller. Disks 26 are configured to extend radially beyond an exterior surface of roller 24 so that disks 26 may be used to apply paint to the facing surfaces of adjacent but spaced boards.

[0028] Paint roller pan 14 includes a paint-loading portion 28 configured to hold a volume of paint to be loaded onto applicator 12. Paint is loaded onto applicator 12 by dipping roller 24 into paint-loading portion 28 of paint roller pan 14. Excess paint is removed from roller 24 by rolling it across tray insert 16. Tray insert 16 includes wring-out structure 30 configured to remove the excess paint from adapter disks 26. Wring-out structure 30 may be in the form of grooves or channels in insert 16, sized to accommodate disks 26. Excess paint is squeezed out from the disks by wring-out structure 30 as the roller is rolled along insert 16.

[0029] Disks 26 may include a paint-carrier material 32 designed to hold paint and apply it evenly to interior surfaces of a gap. Paint-carrier material 32 may be a nap material, similar to the material that typically covers a paint roller, or any other suitable material capable of carrying paint, such as open-celled foam, felt, sponge, etc. Disks 26 may be supported by a rigid core structure 34, as shown in FIG. 2. Rigid core structure 34 enables paint-carrier material 32 to be inserted in a tight gap without folding over on itself, or wadding up, thereby improving the application of paint to the surfaces within the gap. Rigid core structure 34 typically includes an aperture 36, which may be sized to accommodate the circumference of roller 24 or roller-carrier structure 22, as will be explained below.

[0030] Paint-carrier material 32 substantially covers the outer surface of disk 26. In one embodiment paint-carrier material extends radially beyond the rigid core structure 34. Paint may be applied to the bottom surface of a groove or crevice by the paint-carrier material extending beyond the rigid core.

[0031] Turning to FIG. 3, cross-sections of paint roller pan 14 and tray insert 16 are shown taken along line 3-3 of FIG. 1. It can be seen that wring-out structure 30 of insert tray 16 is in the form of grooves sized to accommodate disks 26 and is spaced above bottom 38 of pan 14.

[0032] Another embodiment of a paint roller pan according to the present invention is shown in FIG. 4, generally indicated at 114. Paint roller pan 114 includes integral wring-out structure 130, eliminating the need for a tray insert.

[0033] Turning to FIG. 5 an assembled paint applicator 12 is shown. Handle 20 of applicator 12 enables a user to manipulate the roller assembly. The cylindrical roller 24 may be mounted opposite the handle on roller-carrier structure 22 and configured to apply paint to a surface using a rolling motion. As shown, applicator 12 includes roller 24 and disks 26.

[0034] Consistent with the present invention, roller 24 and disks 26 may be constructed in several ways, as shown in FIGS. 6-8. FIG. 6 is a sectional view of roller 24 and disks

26 taken along line 6-6 of FIG. 5. FIGS. 7 and 8 correspond to FIG. 6, except that they each illustrate a different embodiment of the roller and disk structures of the present invention.

[0035] Turning again to FIG. 6, the depicted embodiment includes frame 18 extending along an axis of rotation for roller-carrier structure 22. Roller-carrier structure 22 supports paint roller 24 and at least one adapter disk 26. For example, two adapter disks 26 are shown positioned along the length of roller 24. Each adapter disk 26 engages the outer surface of roller 24 and may be positioned anywhere along the length of the roller. Disk 26 may engage roller 24 frictionally, or there may be teeth or a similar structure to grip roller 24. Flexibility in positioning adapter disks 26 along the length of roller 24 enables paint application system 10 to be used with a variety of board widths. That is, disks 26 are not fixed in position in the embodiment of FIG. 6. They may be positioned anywhere along the length of roller 24, to correspond to the width and spacing of the boards or other surfaces to be painted. While it may appear in FIG. 6 that there is no nap material under disks 26, that material is merely in compression due to the tight fit of the disks on roller 24.

[0036] Turning to FIG. 7, another embodiment of the present invention is depicted. Frame 18 and roller-carrier structure 22 are similar to that shown in FIG. 6, but paint roller 224 is in three sections. Adapter disks 226 are sandwiched between each adjacent section of paint roller 224. Rigid core 234 of disk 226 includes an aperture sized to slide over roller-carrier structure 22. Therefore, in the embodiment depicted in FIG. 7, adapter disks 226 are supported directly by roller-carrier structure 22 instead of by the roller. That is, there is no nap material that is compressed beneath disks 226. The segments of roller 224 may be sized lengthwise to permit a pair of adapter disks 226 to be positioned on roller-carrier structure 22 with a predefined space between them that corresponding to the width of the boards to be painted. Roller segments 224 may be of a predefined length to precisely control the spacing between adapters 226. In this manner the spacing between the adapters may be precisely matched to the width of the boards being painted.

[0037] As an alternative to what is shown in FIG. 7, segments of roller 224 could be any suitable size. For example, segments may be sized to approximately half the length of roller-carrier structure 22, therefore accommodating a single adaptor disk 226.

[0038] Turning to FIG. 8, still another embodiment of applicator 12 is shown. In the depicted embodiment, roller-carrier structure 22 and frame 18 are identical to the embodiments shown in FIGS. 6 and 7. However, disks 326 of this embodiment are formed integrally with roller 324 as a single part adapted to slide into place over carrier structure 22. The space between disks 326 is fixed in this configuration, and accidental loss of the disks is prevented.

[0039] Turning to FIGS. 9-11 three different embodiments of the present invention are shown. Different embodiments may be useful for a variety of specific painting applications as shown in FIGS. 12-15. The embodiments shown are examples of some of the embodiments useful for a variety of applications and are not meant to be limiting.

[0040] In the embodiment of FIG. 9, a paint applicator system 410 includes an applicator 412 having a shortened

roller 424 and a single adapter disk 426. The depicted embodiment may be useful for apply paint to a picket fence, as shown in FIG. 12. Additionally, this embodiment may be useful for applying paint to a cylindrical railing surface, as shown in FIG. 15.

[0041] In the embodiment of FIG. 10, a paint applicator system 510 is shown. Paint applicator system 510 includes an applicator 512 having a roller 524 that includes three adapter disks 526. This embodiment may be useful for painting gaps between boards having a relatively small width. Employing three adapter disks speeds the application of paint to the internal surfaces of three adjacent gaps. It should be understood that as many adapter disks 26 may be used in the present invention as might be required to achieve the desired paint application task.

[0042] In the embodiment of FIG. 11, a paint applicator system 610 is shown having an applicator 612. Applicator 612 includes four adaptor disks 626 on roller 624. The size of disks 626 and the spacing between each disk may be adapted to standard size paneling and siding. For example, the spacing may be configured to apply paint to T-1-11 type siding and paneling. Application of paint using applicator 612 to T-1-11 siding is shown in FIG. 13.

[0043] FIG. 14 shows paint applicator 12 applying a stain or sealant to the boards 46 of a deck. The spacing between adjacent disks 26 is sized to accommodate the width of boards 46 so that the facing sides of the boards may be coated. Sealing and staining a deck is important for maintaining the deck and preventing dry rot and deterioration. Often the facing surfaces of adjacent boards are neglected in deck maintenance because of the difficulty in applying sealant to those surfaces. The use of application system 10 ensures that the surfaces of deck boards that are hard to reach with conventional brushes and rollers are efficiently and quickly sealed.

[0044] In addition to the various configurations of rollers and disks shown in FIGS. 6-8, various disk structures are contemplated by the present invention. Turning to FIGS. 16 and 17, a disk 726 according to an embodiment of the present invention is shown. Disk 726 may include a rigid core 734 that acts like a hub for a paint carrier material 732. Paint carrier material 732 may be open-cell foam or similar quasi-rigid material capable of carrying paint for application to surfaces within the gap between spaced-apart boards. Typically, paint carrier material 732 and rigid core 734 are manufactured together through a molding process. Alternatively, paint carrier material 732 may be secured to core 734 by an adhesive.

[0045] A sectional view of another embodiment of an adaptor disk according to the present invention is shown in FIG. 18, generally indicated at 826. Disk 826 includes a core 834 with larger dimensions and a paint-carrier material 832 that wraps around core 834 and is secured with an adhesive. As can be seen in FIG. 18, paint-carrier material 832 has a U-shaped cross section. It should be understood that other geometric configurations of disks might be desirable for various paint application tasks.

[0046] Another embodiment of a tray insert 216 is shown in FIGS. 19 and 20. As shown tray insert 216 only covers a portion of paint roller pan 14. Tray insert 216 includes a wring-out structure 230 having at least one channel or

groove. Wring-out structure 230 may include squeeze blades 242, which are mounted to the sides of the grooves of wring-out structure 230. Squeeze blades 242 are adapted to remove the excess paint from adaptor disks 26 with a squeegee-type action. Blades 242 may be formed integrally with insert 216 or may be secured to the insert with an appropriate adhesive.

[0047] It should be understood that insert trays 16 and 216 may be made of any suitable material such as plastic or metal. Insert trays 16 and 216 may include apertures, or a web like structure for allowing paint to flow back down into paint filling portion 28 of roller paint pan 14.

[0048] The use of paint application system 10 may be better understood by way of example. Typically, a user prepares paint applicator 12 for the painting task by sliding two adapter disks 26 over roller 24 and adjusting the space between the adapter disks to be equal to the width of the boards of a deck. The user then slides roller 24, with disks 26 in place, over roller-carrier structure 22. Next the user inserts tray insert 16 into paint roller pan 14 and fills the pan with paint, or a sealant, or stain. The user next dips the roller end of applicator 12 into paint filling portion 28 of pan 14 and rolls it over wring-out structure 30 of tray insert 16 to remove any excess paint. Finally, a user aligns disks 26 with the gaps between adjacent boards of a deck, inserts the disks in the gap and rolls applicator 12 back and forth along the boards. Disks 26 rotate down between adjacent boards through the gaps, and apply paint to the surfaces within the gaps. The user may repeat these steps until the entire deck has been painted or sealed.

[0049] It is believed that the disclosure set forth above encompasses multiple distinct inventions with independent utility. While each of these inventions has been disclosed in its preferred form, the specific embodiments thereof as disclosed and illustrated herein are not to be considered in a limiting sense as numerous variations are possible. The subject matter of the inventions includes all novel and non-obvious combinations and subcombinations of the various elements, features, functions and/or properties disclosed herein. Similarly, where the claims recite "a" or "a first" element or the equivalent thereof, such claims should be understood to include incorporation of one or more such elements, neither requiring nor excluding two or more such elements.

[0050] It is believed that the following claims particularly point out certain combinations and subcombinations that are directed to one of the disclosed inventions and are novel and non-obvious. Inventions embodied in other combinations and subcombinations of features, functions, elements and/or properties may be claimed through amendment of the present claims or presentation of new claims in this or a related application. Such amended or new claims, whether they are directed to a different invention or directed to the same invention, whether different, broader, narrower or equal in scope to the original claims, are also regarded as included within the subject matter of the inventions of the present disclosure.

1. An adaptor for use with a cylindrical shaped paint roller, having an external surface and a length, the adaptor comprising:

a disk having an aperture sized to circumscribe the paint roller and to extend radially beyond the external surface of the paint roller, wherein the disk is configured to slide along the length of the paint roller in frictional engagement therewith; and

a paint-carrier material covering at least a portion of the disk.

2. The adaptor of claim 1, wherein the paint-carrier material includes nap substantially covering the exterior of the disk.

3. The adaptor of claim 1, wherein the disk is sized to fit between a pair of spaced-apart boards and includes a rigid core structure.

4. An applicator for surface coatings comprising:

a roller having a substantially cylindrical shape including an outer surface;

a frame having a roller-carrier structure configured to receive the roller and rotate about an axis and a handle structure; and

a disk portion configured to extend radially beyond the outer surface of the roller, wherein the disk has a thickness less than half the length of the roller.

5. The applicator of claim 4, wherein the disk is formed integral with the roller-carrier structure.

6. The applicator of claim 4, wherein the disk is formed integral with the roller.

7. The applicator of claim 4, wherein the disk includes an aperture sized to frictionally engage the outer surface of the roller and be positioned along the length of the roller in frictional engagement therewith.

8. The applicator of claim 4, wherein the roller includes roller segments having a length less than the length of the roller-carrier structure and the disk includes an aperture sized to accommodate the roller-carrier structure and be positioned on the roller-carrier structure interposed adjacent roller segments.

9. The applicator of claim 4, wherein a nap material substantially covers the exterior surface of the roller.

10. The applicator of claim 4, wherein the disk includes a nap material substantially covering the exterior surface of the disk.

11. The applicator of claim 10, wherein the nap material extends radially beyond a core section of the disk.

12. The applicator of claim 4, further including a plurality of disks positionable along the length of the roller.

13. The applicator of claim 12, wherein the plurality of disk are spaced-apart a user selectable predefined distance such that each disk may be inserted between adjacent spaced-apart boards.

14. The applicator of claim 13, wherein the thickness of the nap material substantially covering the disk is sized to fit within the space between the spaced-apart boards.

15. The applicator of claim 14, wherein the spaced-apart predefined distance is sized for planks in a deck.

16. The applicator of claim 14, wherein the spaced-apart predefined distance is sized for pickets of a fence.

17. A kit for applying surface coatings to a space between adjacent spaced-apart boards comprising:

a roller having a substantially cylindrical shape and a nap substantially covering the outer surface of the roller; and

a disk portion adjustably coupled with the roller extending radially beyond the outer surface of the roller.

18. The kit of claim 17, wherein the disk includes an aperture in its center configured to slide over the roller for positioning along the length of the roller.

19. The kit of claim 18, further comprising:

a tray insert configured to fit within a roller paint pan and having a recessed groove sized to accommodate the disk.

20. The kit of claim 19, further comprising:

a plurality of disks each having an aperture in its center sized to accommodate a cylindrical roller and configured to slide over the roller and extend radially therefrom;

and wherein the tray insert includes a plurality of recessed grooves sized to accommodate the plurality of disks.

21. A paint roller pan comprising:

a paint loading portion; and

a wring-out structure including at least one recessed groove sized to accommodate at least one disk extending radially beyond exterior surface of a cylindrical paint roller.

22. The wring-out device of claim 21, wherein the plurality of grooves are spaced-apart at user-selectable predefined intervals.

23. The paint roller pan of claim 21, wherein the wring-out structure is a removable insert for the paint roller pan.

* * * * *

[54] **HEXAGON TILE WITH EQUILATERAL REINFORCEMENT**

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[73] Assignee: **Sport Court, Inc.**, Salt Lake City, Utah

[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: 09/128,123

[22] Filed: Aug. 3, 1998

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/531,926, Sep. 21, 1995, Pat. No. 5,787,654.

[51] Int. Cl.⁶ E04F 15/16

[52] U.S. Cl. 52/177; 52/180; 52/302.3; 52/403.1; 52/506.01; 52/588.1; 52/591.1; 52/747.1

[58] Field of Search 52/81.4, 81.5, 52/126.5, 126.6, 177, 180, 220.5, 302.3, 390, 403.1, 506.01, 581, 588.1, 591.1, 591.2, 650.3, 663, 747.1, 747.11; 403/364, 393, DIG. 10

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Primary Examiner—Carl D. Friedman

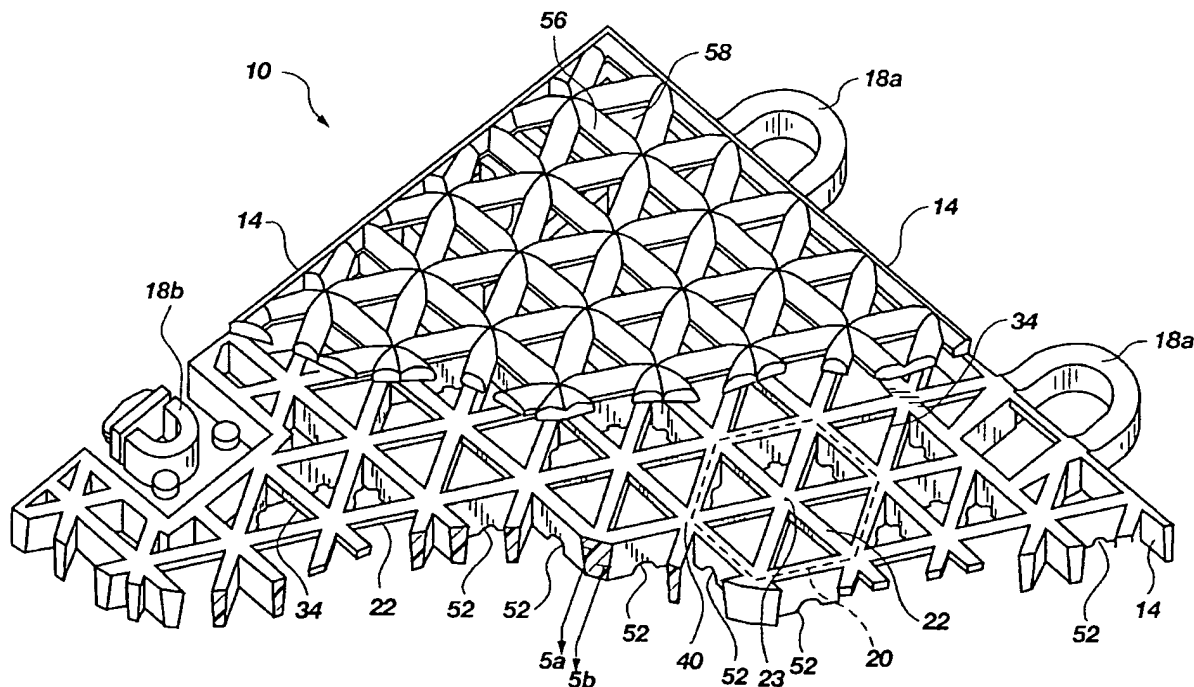
Assistant Examiner—Timothy B. Kang

Attorney, Agent, or Firm—Thorpe, North & Western

[57] ABSTRACT

A polymer tile for forming a floor covering, comprising a perimeter wall for providing support and for enclosing a perimeter boundary for the tile. A honeycomb configuration of intermediate wall structure is interconnected between inner portions of the perimeter wall and forms recurring hexagon units of hexagon support walls of common dimension, wherein the hexagon support walls have a height common with a height of the perimeter wall for providing support for a load imposed at a top surface of the tile within an intermediate area. A plurality of ribs of lesser height than the hexagon support walls are disposed in traversing orientation between opposing vertices of the hexagon support walls, and are joined at a central axis of the hexagon units as a common load transfer point to form a tile grid defining a plurality of hexagon support walls reinforced by equilateral triangles of lesser height formed within the hexagon units of the tile.

19 Claims, 4 Drawing Sheets



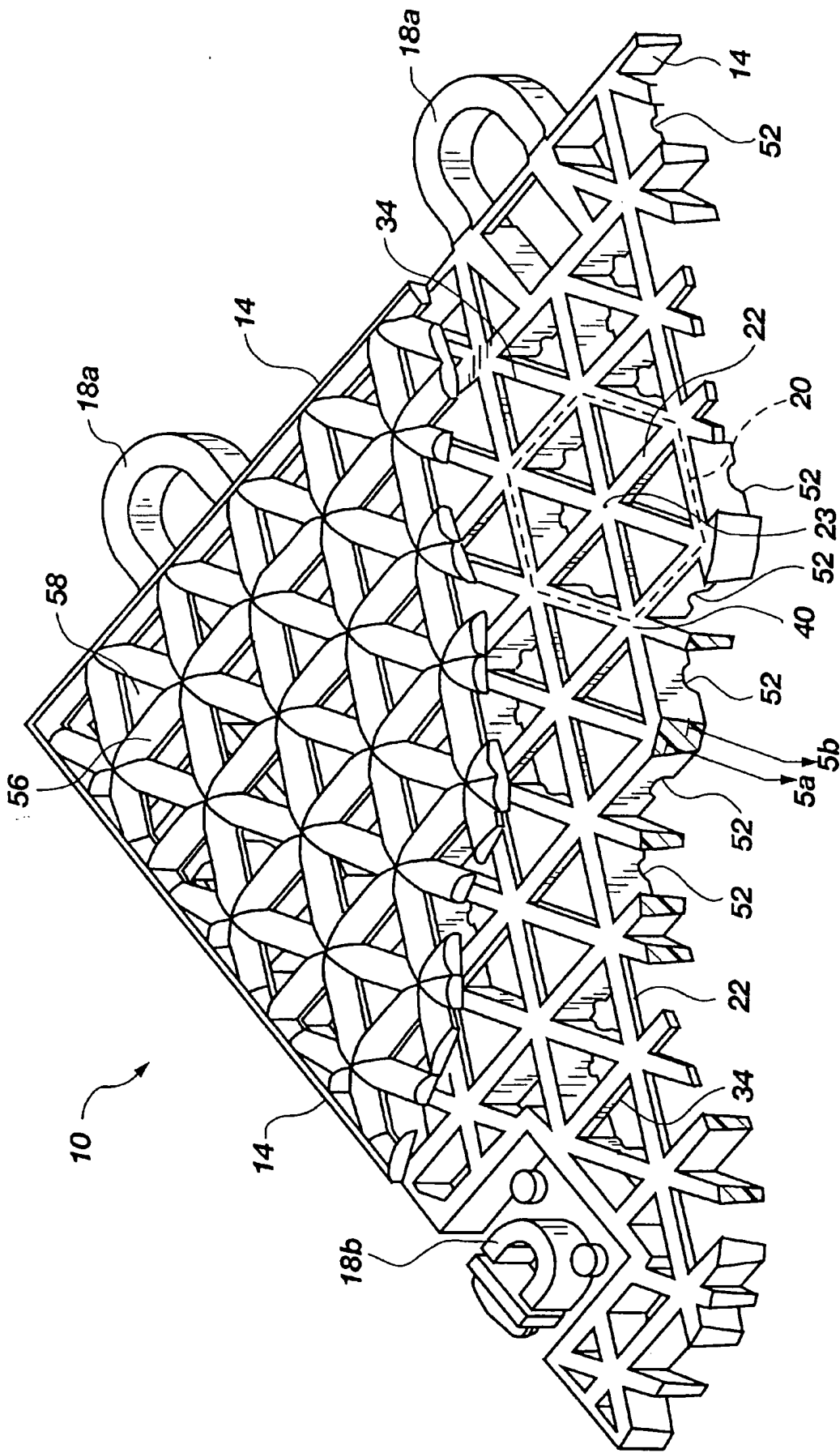


Fig. 1

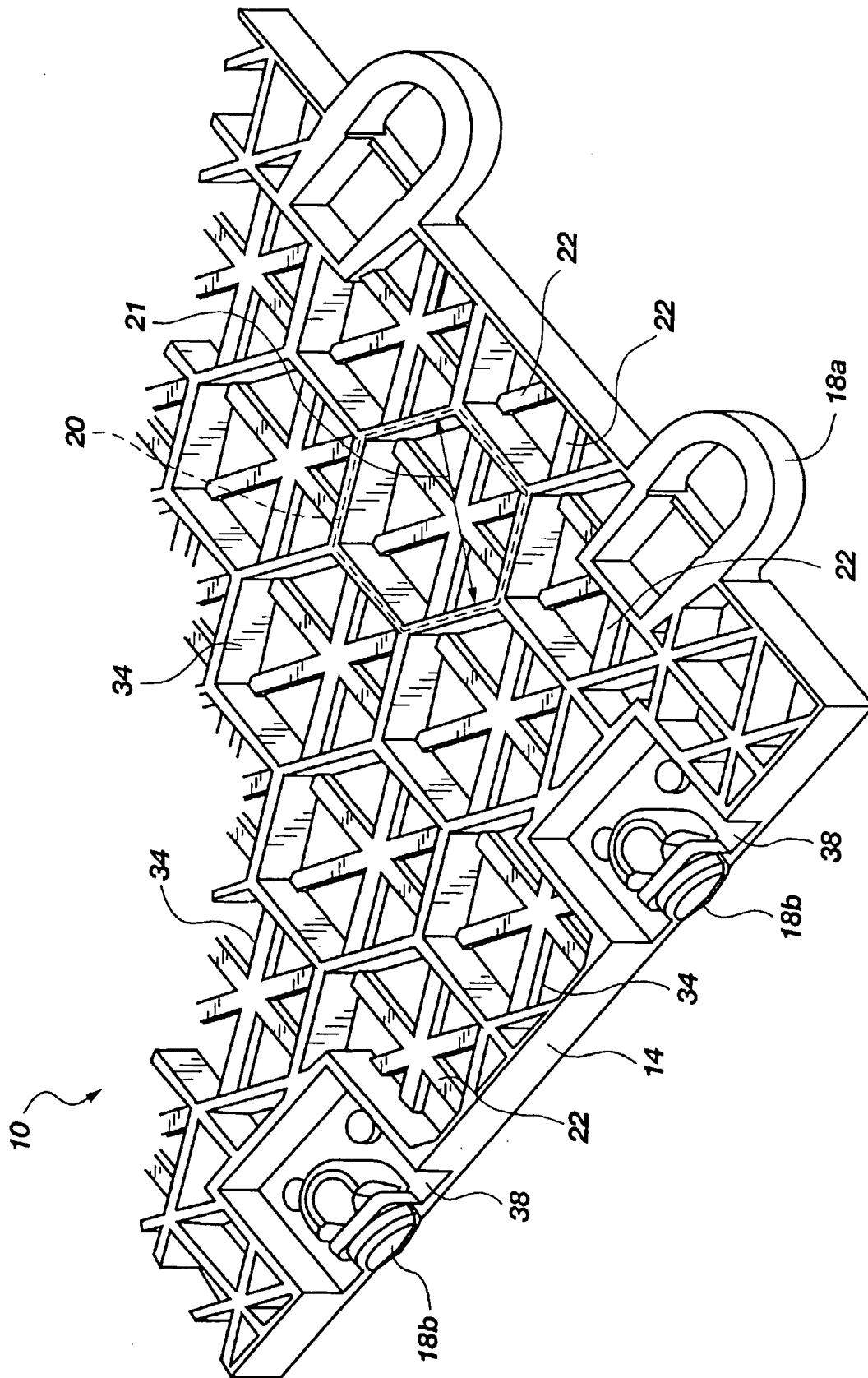


Fig. 2

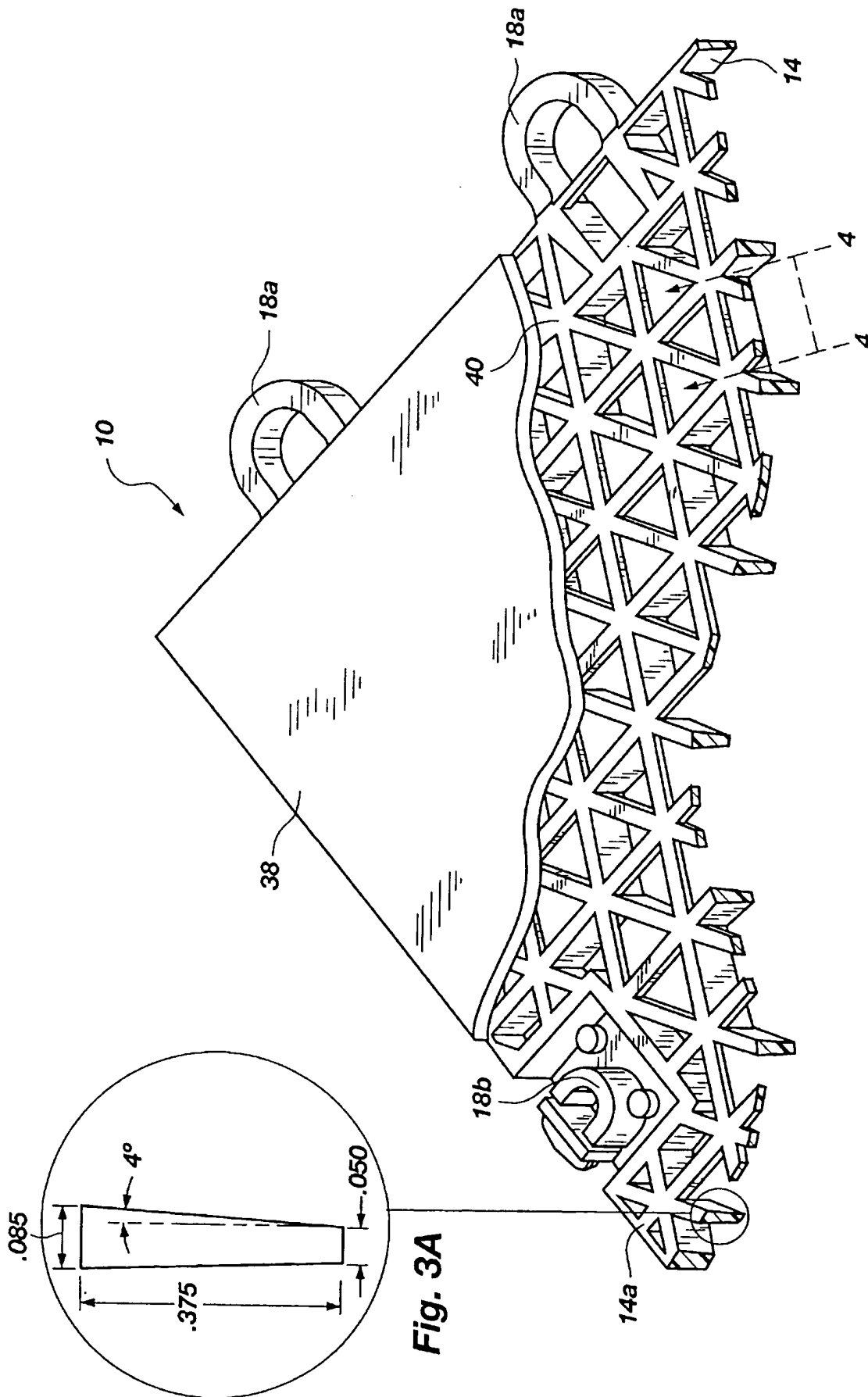


Fig. 3

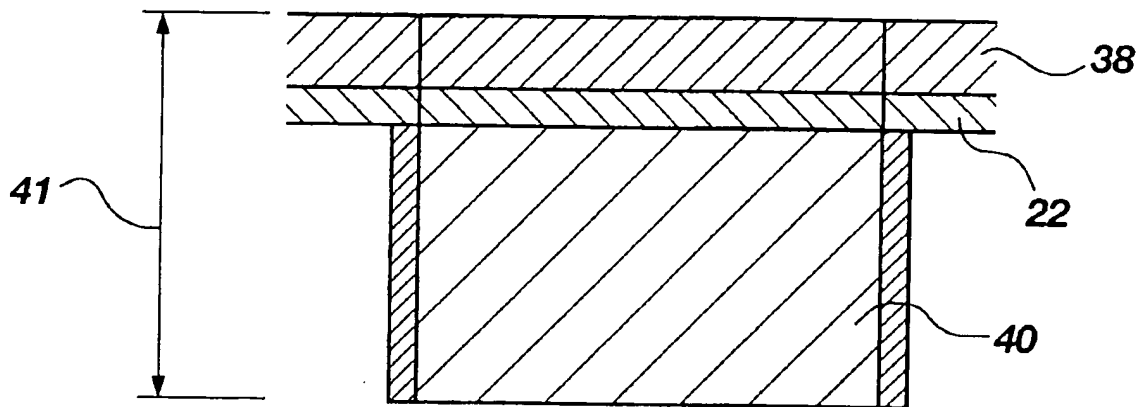


Fig. 4

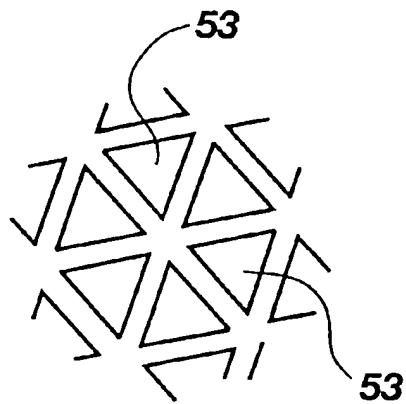


Fig. 5a

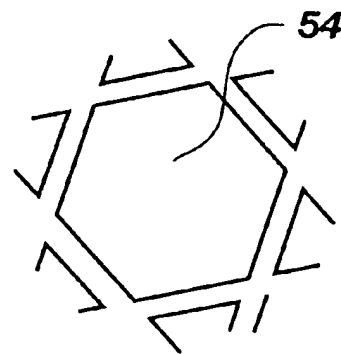


Fig. 5b

HEXAGON TILE WITH EQUILATERAL REINFORCEMENT

This is a continuation in part of Ser. No 08/531,926, filed on Sep. 21, 1995 now U.S. Pat. No. 5,787,654.

BACKGROUND OF THE INVENTION

The present invention relates to a tile for use in modular flooring assemblies such as those used for athletic play areas. More particularly, the present invention is related to a modular flooring assembly which improves the dispersion of forces applied to the floor in order to prevent deformation and reduce wear on the flooring assembly.

Numerous types of flooring have been used to create playing areas for such sports as basketball and tennis, as well as for other purposes. These flooring assemblies include concrete, asphalt, wood and other materials which have varying characteristics. For each type of flooring, there are corresponding advantages and disadvantages. For example, concrete flooring is easy to construct and provides long term wear. However, the concrete provides no "give" during use and many people are injured each year during sporting events due to falls and other mishaps. Wood floors, such as are used for many basketball courts, have an appropriate amount of give to avoid such injuries. The wood floors, however, are expensive to install and require continued maintenance to keep them in good condition.

Due to these concerns, the use of modular flooring assemblies made of synthetic materials has grown in popularity. The synthetic floors are advantageous for several reasons. A first reason for the flooring assemblies' popularity is that they are typically formed of materials which are generally inexpensive and lightweight. If a tile is damaged it may easily be replaced. If the flooring needs to be temporarily removed, the individual tiles making up the floor can easily be detached, relocated, and then reattached to form a new floor in another location. Examples of modular flooring assemblies include U.S. Pat. No. Des. 274,588; U.S. Pat. No. 3,438,312; U.S. Pat. No. 3,909,996; U.S. Pat. No. 4,436,799; U.S. Pat. No. 4,008,548; U.S. Pat. No. 4,167,599; U.S. Pat. No. 4,226,064 and U.S. Pat. No. Des. 255,744.

A second reason for the popularity of the flooring assemblies is that the durable plastics from which they are formed are long lasting. Unlike other long lasting alternatives, such as asphalt and concrete, the material is generally better at absorbing impacts, and there is less risk of injury if a person falls on the plastic material, as opposed to concrete or asphalt. The connections for the modular flooring assembly can even be specially engineered to absorb lateral force to avoid injuries, as is described in U.S. Pat. No. 4,930,286. Additionally, the flooring assemblies generally require little maintenance as compared to other flooring, such as wood.

One problem which has plagued the modular floor covering assemblies is that of uneven load distribution. Uneven load distribution can make the floor feel unnatural to those using it, and can result in premature failure of the flooring tiles. Both of these problems have limited the use of the modular flooring systems. If the floor feels unnatural, those using the facility will often object to the flooring tiles and/or return to more conventional floor materials, such as a wood or concrete. Likewise, premature failure of the flooring tiles also increases the likelihood that the modular flooring will be replaced by other alternatives.

Attempts to create improved flooring assemblies have lead to numerous different designs. U.S. Pat. No. 5,787,654 disclosed one such improvement in the form of an "isogrid"

tile having equilateral sides in triangular configuration. While such flooring assemblies offer a significant improvement in load distribution and enhanced tile performance, a substantial cost is involved with the quantity of material needed for the equilateral wall structure of an isogrid tile. Thus, there is needed an improved tile which has a configuration suited to develop the even distribution of load and impact forces, but providing economy in cost.

In addition to the need for improved tiles which more evenly distribute load, there is also a need for an improved tile which decreases the risk of warping and other distortions, while at the same time reducing the amount of plastic material to meet tile specifications.

OBJECTS AND SUMMARY OF THE INVENTION

Thus, it is an object of the present invention to provide a tile with near equivalent strength and loading capacity as the isogrid tile, but with less cost and complexity in manufacture.

It is yet another object of the invention to provide a modular flooring assembly which includes numerous tiles connected to one another to form a floor for sporting events which evenly distributes load placed on the modular flooring assembly.

The above and other objects of the invention are realized in specific illustrated embodiments of a hexagon tile comprised of a honeycomb configuration of supporting wall structure forming recurring hexagon units. Each hexagon unit includes a plurality of parallel ribs disposed in traversing orientation between opposing vertices of the hexagon unit and being joined at a central axis of the hexagon unit as a common load transfer point to form a grid defining a plurality of equilateral triangles within the hexagon units of the tile.

In accordance with another aspect of the invention, the tile includes a perimeter support wall defining an outer boundary of the tile and including interconnecting structure for releasably connecting with interconnecting structure of adjacent tiles to form a continuous floor surface. An intermediate grid structure is internally coupled to the perimeter support wall and within the outer boundary. The grid structure comprises hexagon units having at least two differing cross-sectional geometries taken in two different planes parallel to a top surface of the tile, including:

- (i) a first planar cross-section comprising a repeating pattern of equilateral triangles extending substantially across an entire area of the first planar cross-section and being located at an upper portion of the tile; and
- (ii) a second planar cross-section comprising a repeating pattern of hexagonal polygons extending in parallel orientation substantially across an entire area of the second planar cross-section of the same tile.

In accordance with still another aspect of the invention, a flat surface layer is attached to an upper end of the ribs so as to provide a generally planar floor surface, while providing the improved load dispersion of the equilateral triangles discussed above.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and advantages of the invention will become apparent from a consideration of the following detailed description presented in connection with the accompanying drawings in which:

FIG. 1 shows a partial, fragmented, elevational perspective view of a flooring tile having a contoured tread surface

subsupport structure with a hexagon grid configuration formed in accordance with one embodiment of the present invention.

FIG. 2 illustrates a bottom, perspective view of the hexagon support grid, including interlocking loop and insert structure for joining multiple tiles.

FIG. 3 shows a cut-away view of the flooring tile with a flat surface layer disposed thereon in accordance with one aspect of the invention;

FIG. 3A is a detailed side view of a wall in accordance with one aspect of the present invention.

FIG. 4 depicts a cross-section taken along the lines 4—4 of FIG. 3.

FIG. 5 is a geometric representation of planar intersection at an isolated hexagon unit, as identified by plane intersections 5a and 5b.

DETAILED DESCRIPTION

Reference will now be made to the drawings in which the various elements of the present invention will be given numeral designations and in which the invention will be discussed so as to enable one skilled in the art to make and use the invention. It is to be understood that the following description is only exemplary of the principles of the present invention, and should not be viewed as narrowing the appended claims.

Referring to FIG. 1, there is shown a top perspective view of a portion of a flooring tile, generally indicated at 10, made in accordance with the principles of the present invention. The flooring tile 10 has an outer perimeter which is defined by a wall 14. A pair of interlocking attachments, typically a positioning loop 18a and a resilient insert 18b which nests in the positioning loop, are formed in respective sides of the wall so as to nest with a loop or insert from an additional tile which would be positioned adjacent the tile 10 in FIG. 1. The positioning loop 18a and the insert 18b are disposed on the flooring tile 10 to enable a plurality of tiles to be joined together in a single floor assembly, such as a tennis court or basketball court.

While many attachment devices have been taught in the prior art, the specific positioning loop 18a and the resilient insert 18b shown are preferred because they allow lateral give between the tiles. The lateral give allows for improved absorption of sudden forces, such as those which are common to games like basketball and tennis which involve sudden acceleration and deceleration. A preferred embodiment of the attachment devices is explained in detail in U.S. Pat. No. 4,930,286 which is expressly incorporated herein.

Disposed inside the exterior wall 14 are repeating groups of polygon support structure having a hexagon shaped perimeter wall. This pattern is identified by dashed line 20. It will be noted that each side of the hexagon defines a common side with an adjacent hexagon unit in recurring pattern. The dimensions of the hexagon units are best defined by the diagonal lengths 21 which traverse between opposing parallel side walls of the hexagon. Typically, this length will range between 0.3 to 1.0 inches, and is preferably 0.5 to 0.7 inches. The embodiments illustrated in the figures have been enlarged for detail. Actual tiles have been constructed with a hexagon cell diameter of 0.625 inches, with a height of approximately 0.5 inches.

As shown in FIG. 1, the hexagon support structure includes a plurality of elongate ribs 22 disposed across the diagonal of the polygon to form contiguous equilateral triangles having a common axis 23 at the central axis of the

hexagon perimeter. These cross ribs provide reinforcing support similar to the equilateral ribs of the referenced isogrid tile of the parent application. Dimensions range from 0.10 to 0.30 inches in cross-section width and 0.03 to 0.30 inches in height. Preferred height and width are 0.05 inches and 0.075 inches respectively when applied to a tile having a full plate tread surface as shown in FIG. 3.

Typical tile dimensions and composition will depend upon the specific application to the tile will be applied. Sport uses, for example, generally require tiles having a square configuration with a side dimension of either 9.8425 inches (metric tile) or 12.00 inches. Compositions are usually of an olefin polymer such as polypropylene or polyethylene. Those skilled in the art will appreciate other variations in size and composition that may be implemented within the parameters of the present invention.

It has been discovered that a surprising retention of stiffness and strength occurs with removal of the lower portion of wall structure of the isogrid ribs which form diagonals of the hexagon configuration. This modification of the previous isogrid tile is readily accomplished in the mold process by simply reducing the tool cavity corresponding to the cross-rib portion of the mold. Not only is there an unexpected increase of strength and stiffness with a significant reduction in polymer material, but mold costs are reduced and production efficiency is substantially enhanced. Mold release is particularly improved because of the significant decrease in surface area and cavity volume.

Formation of these cross ribs 22 maintains the plurality of equilateral triangles as shown in the figures. In accordance with the invention previously disclosed in the parent patent, it has been found that the equilateral triangles 34 formed by the intersecting elongate ribs provide an improved mechanism for distributing load in the tile 10, and therefore over an entire flooring assembly. This is especially true for rolling and point loads. The plurality of equilateral triangles 34 better distribute the load, and reduce the risk of damage when heavy loads are rolled over the tile 10. By maintaining the hexagon diameter at less than one inch, and by adjusting the height of the cross ribs based on the nature of anticipated load, adequate force distribution is maintained. Lesser lengths in diameter allow substantial reductions in rib height, giving the attendant benefit of mold release and reduction of plastic material.

Top wear or tread surface structure may be selected from a variety of well known configurations. FIG. 1 shows a contoured surface 56 suitable for outdoor use and sport playing surfaces. The contoured surface provides a measure of comfort for persons without shoes and for protection when players fall and slide along or otherwise contact the surface. The open grid structure 58 at the top of the tile allows debris and water to readily pass through.

FIG. 3 depicts a tread or wear surface formed of a plate or surface member 38. Those skilled in the art will appreciate that in certain applications, the user of the flooring tile 10 will desire a generally planar surface on which to stand or set items, or on which to conduct sporting activities. To accomplish this, a flat surface member 38—typically a synthetic, rubber-like material—is disposed on top of the hexagon support structure and cross ribs, and extends to a position adjacent to the wall 14 about the periphery of the tile 10. Other surface configurations will be apparent to those skilled in the art. Such surfacing provide additional stiffening thickness to the overall tile, and generally will have a thickness of approximately 0.05 to 0.1 inch. The plate embodiment of FIG. 3, for example, measures a thickness of

0.075 inches. As illustrated in FIG. 4, the total tile height 41 of 0.50 includes (i) the tread layer 38 of 0.075 inches, (ii) the rib 22 height of 0.05 inches, and (iii) lower hexagon support wall 40 at 0.375 inches.

Many prior art modular flooring assemblies have had considerable problems with deformation. One typical cause is the thermal expansion and contraction of materials placed on the tiles in order to form a generally contiguous surface. The thermal expansion and contraction typically leads to tiles which are warped or otherwise deformed.

To overcome these concerns, the flat surface member 38 will typically be mounted to the grid formed by the hexagon unit with interstitial equilateral triangle structure 34 and the wall 14 in a manner similar to that described in U.S. Pat. No. 4,930,286, which has been incorporated herein.

Referring now to FIG. 3, there is shown a close-up, fragmented view of the tile 10. Each of the hexagon walls has a thickness of about 0.05 inches at its base, and 0.085 inches the upper section which joins with the rib or tread portion. Rib thickness may be slightly larger. To facilitate mold release, a four degree draft (shown in FIG. 3A) from the bottom end of the hexagon wall is provided. In other words, support walls taper outwardly toward the top end at an angle of about four degrees. Such a draft is especially beneficial when the tiles are molded from a plastic material. The draft allows easy removal of the flooring tile 10 from a mold.

As was mentioned above, the equilateral triangle 34 grid improves the performance of the tile 10. Specifically, the triangles 34 improve the ability of the tile to disperse load without warping—especially heavy point loads and rolling loads. The load is dispersed by the respective ribs which are disposed in three different orientations which are evenly spaced from one another. This enables the tile 10 to perform better and last longer than conventional tiles.

Thus, there is disclosed an improved tile for flooring assemblies. The hexagon tile uses ribs forming a plurality of equilateral triangles to more evenly distribute load caused when using the floor. The combination of hexagon support structure with equilateral triangular grid also allows thinner tiles to be used while retaining the same overall mass as conventional tiles.

This combination of hexagon geometry with internal equilateral triangles can also be represented as in FIG. 5a and 5b, which show the intersection of two parallel planes (represented in location by the cross line at the tile wall and in orientation by the attached arrow 5a and 5b) at differing heights within the tile. The invention within the tile is characterized by a perimeter support wall 14 defining an outer boundary of the tile and including interconnecting structure 18a for releasably connecting with interconnecting structure 18b of adjacent tiles to form a continuous floor surface. The cross ribs 22 form intermediate grid structure which is internally coupled to the perimeter support wall and within the outer boundary. This grid structure provides hexagon units having at least two differing cross-sectional geometries taken in the two different planes represented by 5a and 5b. These planes are parallel to a top surface of the tile, and provide two intersecting planar geometries as follows:

- (i) a first planar cross-section (FIG. 5a) comprising a repeating pattern of equilateral triangles 53 extending substantially across an entire area of the first planar cross-section and being located at an upper portion of the tile; and
- (ii) a second planar cross-section (FIG. 5b) comprising a repeating pattern of hexagonal polygons 54 extending

in parallel orientation substantially across an entire area of the second planar cross-section of the same tile. It will be apparent to those skilled in the art that other forms of definition of the present invention may be possible.

An additional benefit of the hexagon tile is an enhanced acoustic response. Conventional plastic tiles are sometimes criticized because of a hollow, thin sound when impacted with player activity. This is in contrast to the solid, firm response of a hardwood floor. The new hexagon tile develops an acoustic response more closely related to the solid sound of the hardwood floor, and therefore will contribute to enhanced satisfaction by users.

Those skilled in the art will recognize numerous additional modifications which can be made without departing from the scope and spirit of the present invention. The appended claims are intended to cover such modifications.

What is claimed is:

1. A polymer tile for forming a floor covering, comprising:
 - a perimeter wall for providing support and for enclosing a perimeter boundary for the tile;
 - a honeycomb configuration of intermediate wall structure interconnected between inner portions of the perimeter wall and forming recurring hexagon units of hexagon support walls of common dimension, said hexagon support walls having a height common with a height of the perimeter wall for providing support for a load imposed at a top surface of the tile within an intermediate area; and
 - a plurality of ribs of lesser height than the hexagon support walls and being disposed in traversing orientation between opposing vertices of the hexagon support walls, said ribs being joined at a central axis of the hexagon units as a common load transfer point to form a tile grid defining a plurality of hexagon support walls reinforced by equilateral triangles of lesser height formed within the hexagon units of the tile.
2. The tile of claim 1, wherein a majority of wall sections of the hexagon units form respective common walls with respective adjacent hexagon units within the tile.
3. The tile of claim 2, wherein the hexagon units and plurality of traversing ribs are disposed in a common plane.
4. The tile of claim 1, wherein opposing side walls of the hexagon units are spaced apart from one another between 0.3 to 1.0 inches.
5. The tile of claim 4, wherein the side walls are spaced apart at a distance between 0.5 and 0.7 inches.
6. The tile of claim 4, wherein the side walls are spaced apart and a distance of approximately 0.625 inches.
7. The tile of claim 1, wherein the interconnecting ribs traversing between the vertices of the hexagon units have a cross-section thickness within a range of 0.10 to 0.30 inches and a height between 0.03 to 0.30 inches.
8. The tile of claim 7, wherein the interconnecting ribs traversing between the vertices of the hexagon units have a cross-section thickness of approximately 0.075 inches and a height of approximately 0.05 inches.
9. The tile as defined in claim 1, further comprising interconnecting structure for releasably connecting with interconnecting structure of adjacent tiles to form a continuous floor surface.
10. A tile for forming a floor covering, comprising:
 - a perimeter support wall defining an outer boundary of the tile and including interconnecting structure for releasably connecting with interconnecting structure of adjacent tiles to form a continuous floor surface;

intermediate grid structure internally coupled to the perimeter support wall and within the outer boundary, said grid structure comprising hexagon units having at least two differing cross-sectional geometries taken in two different planes parallel to a top surface of the tile, including:

- (i) a first planar cross-section comprising a repeating pattern of equilateral triangles extending substantially across an entire area of the first planar cross-section and being located at an upper portion of the tile; and
- (ii) a second planar cross-section comprising a repeating pattern of hexagonal polygons extending in parallel orientation substantially across an entire area of the second planar cross-section of the same tile.

11. The tile of claim 10, wherein a majority of wall sections of the hexagon units form respective common walls with respective adjacent hexagon units within the tile.

12. The tile of claim 11, wherein the hexagon units include a plurality of traversing ribs disposed in a common plane with the hexagonal units.

13. The tile of claim 10, wherein opposing side walls of the hexagon units are spaced apart from one another between 0.3 to 1.0 inches.

14. The tile of claim 13, wherein the side walls are spaced apart at a distance between 0.5 and 0.7 inches.

15. The tile of claim 14, wherein the side walls are spaced apart and a distance of approximately 0.625 inches.

16. The tile of claim 10, wherein the interconnecting ribs traversing between the vertices of the hexagon units have a cross-section thickness within a range of 0.10 to 0.30 inches and a height between 0.03 to 0.30 inches.

17. The tile of claim 16, wherein the interconnecting ribs traversing between the vertices of the hexagon units have a cross-section thickness of approximately 0.075 inches and a height of approximately 0.05 inches.

18. The tile as defined in claim 10, further comprising interconnecting structure for releasably connecting with interconnecting structure of adjacent tiles to form a continuous floor surface.

19. A method for uniformly dispersing load in a floor covering assembly, the method comprising:

- (a) forming the floor covering from a plurality of tiles having intersecting ribs disposed so as to form a plurality of hexagonal support walls configured in honeycomb manner and including reinforcing cross rib structure disposed between vertices of the hexagonal support walls to form six equilateral triangles wherein the cross ribs have a lesser height than the hexagonal support walls; and

b) placing a load on the tile.

* * * * *

(12) **United States Design Patent**
Prokop et al.

(10) Patent No.: **US D524,501 S**
(45) Date of Patent: ** ***Jul. 4, 2006**

(54) **LIQUID CONTAINER WITH SUSPENDED SURFACE**

(75) Inventors: **Gary F. Prokop**, Wheaton, IL (US);
Randall P. Bell, River Forest, IL (US);
Mark D. Kiel, Bensenville, IL (US)

(73) Assignee: **Valspar Sourcing, Inc.**, Minneapolis, MN (US)

(*) Notice: This patent is subject to a terminal disclaimer.

(**) Term: **14 Years**

(21) Appl. No.: **29/197,434**

(22) Filed: **Jan. 15, 2004**

(51) **LOC (8) Cl.** **07-07**

(52) **U.S. Cl.** **D32/53.1**

(58) **Field of Classification Search** **D32/53, D32/53.1, 54; D3/302, 304, 307, 309; D7/601, D7/602, 630; D9/424, 425, 430-432; 206/505, 206/518; 220/570, 600, 639, 645, 652, 660, 220/669, 674-679, 694, 695, 697, 702; 15/257.05, 15/257.06**

See application file for complete search history.

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Primary Examiner—Alan P. Douglas

Assistant Examiner—Lavone D. Tabor

(74) *Attorney, Agent, or Firm*—Mueting, Raasch & Gebhardt, P.A.

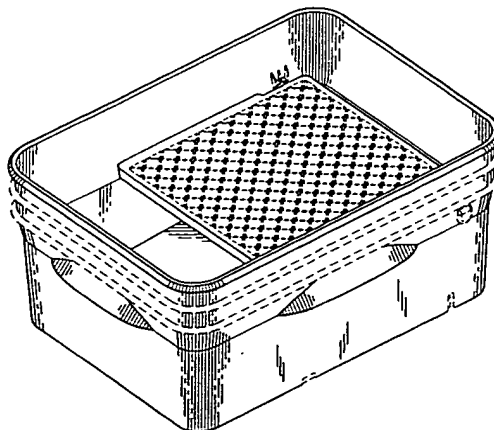
(57) **CLAIM**

The ornamental design for a liquid container with suspended surface, as shown and described.

DESCRIPTION

FIG. 1 is an upper perspective view of a liquid container with suspended surface showing the new design;
FIG. 2 is a left side elevation view thereof;
FIG. 3 is a right side elevation view thereof;
FIG. 4 is a rear side elevation view thereof;
FIG. 5 is a front side elevation view thereof;
FIG. 6 is a top plan view thereof;
FIG. 7 is a bottom plan view thereof; and,
FIG. 8 is a section view thereof taken along line 8—8 of FIG. 6; and,
FIG. 9 is a lower perspective view thereof.
The features illustrated in broken lines in the figures do not form a part of the claimed invention.

1 Claim, 9 Drawing Sheets



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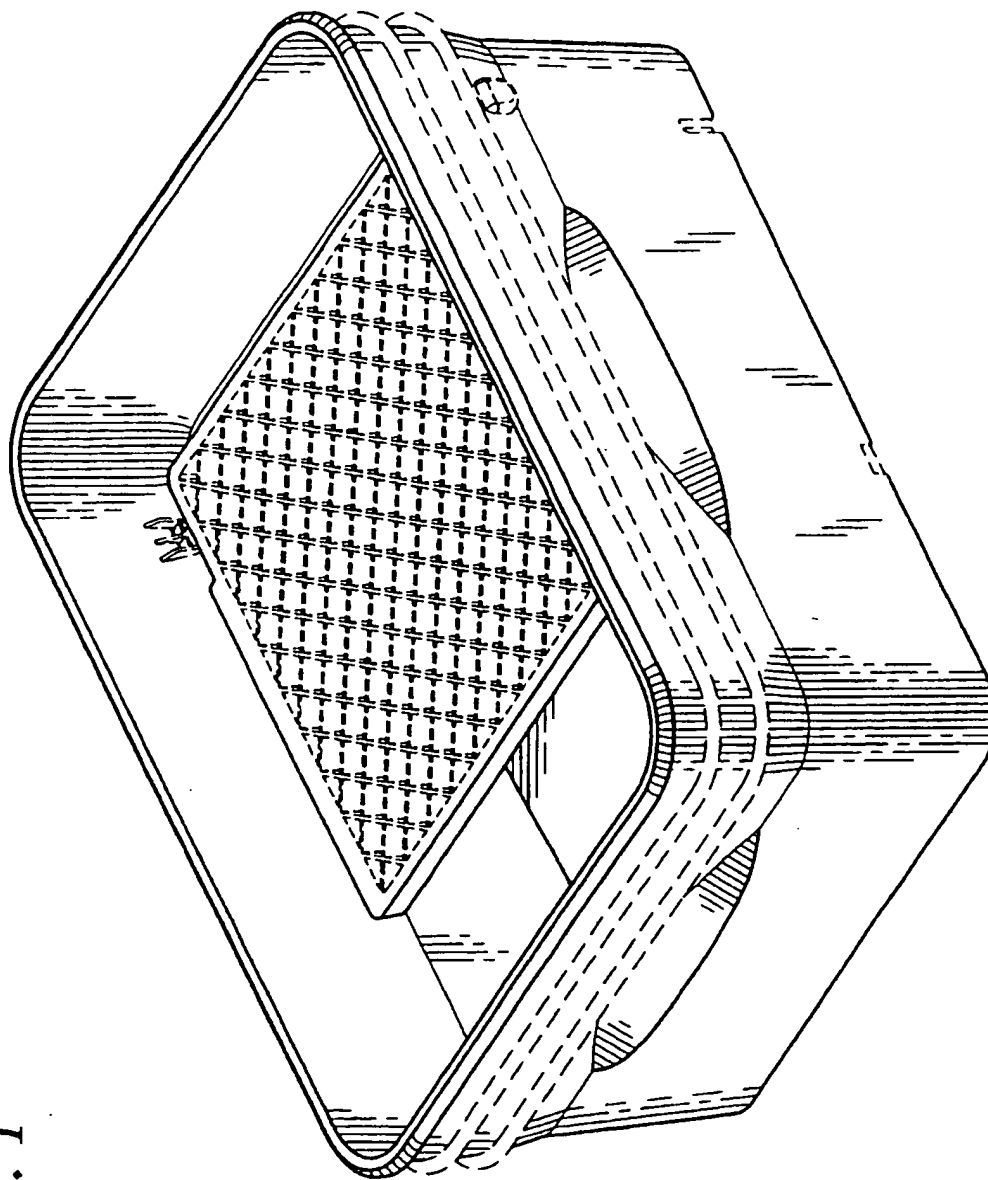


Fig. 1

Fig. 2

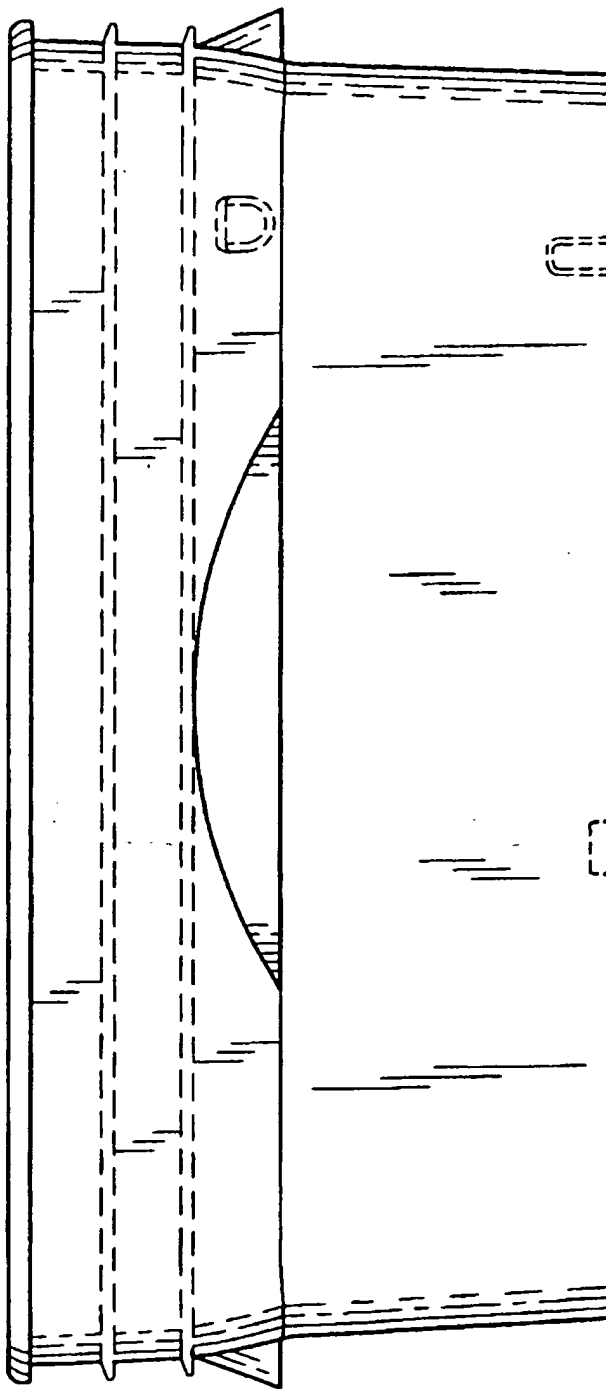
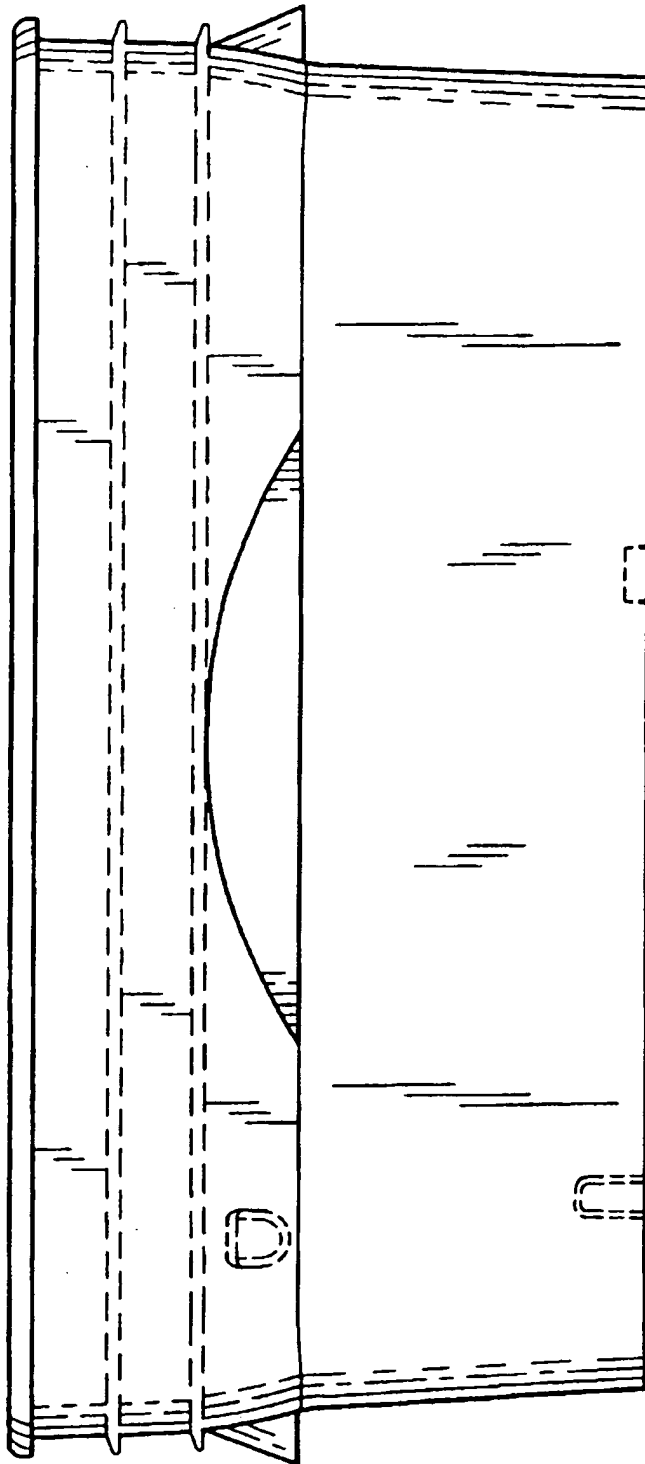


Fig. 3



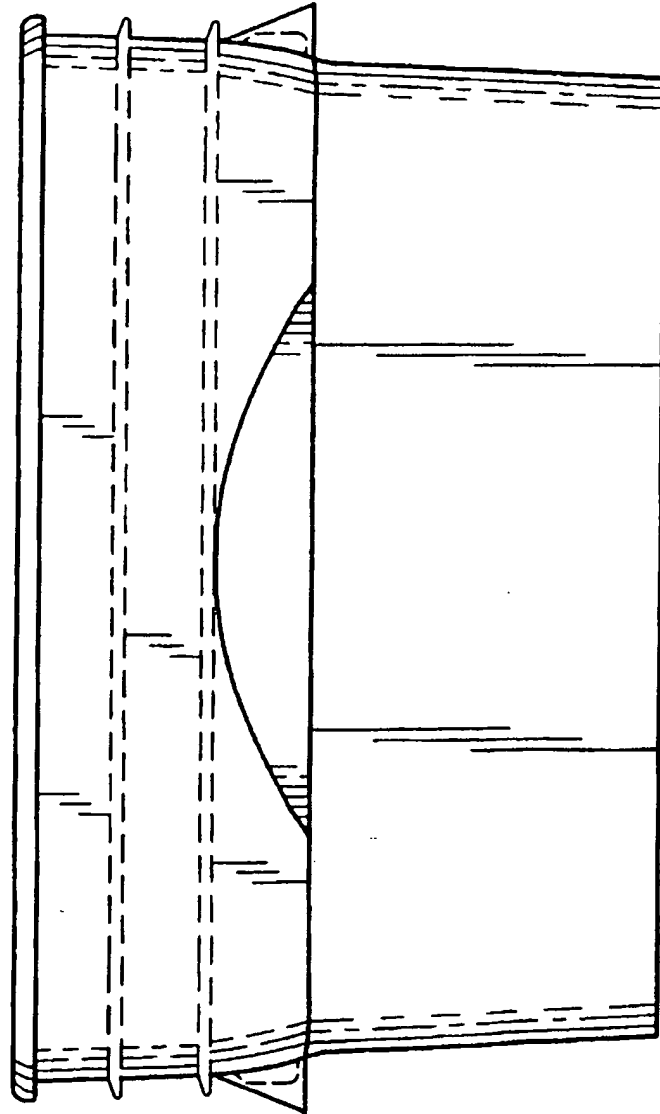


Fig. 4

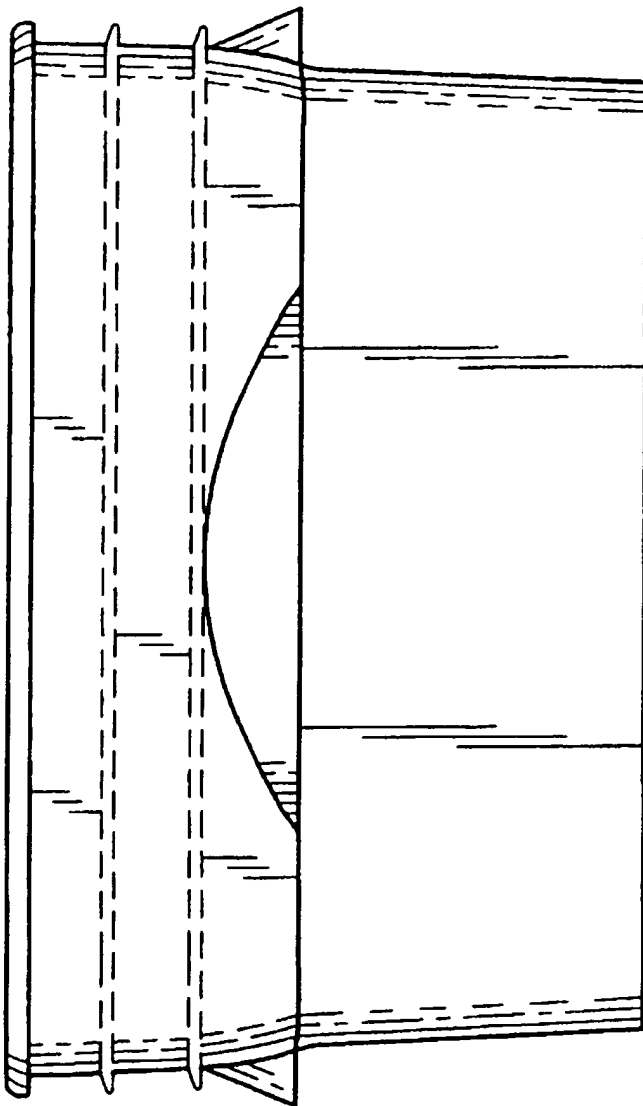


Fig. 5

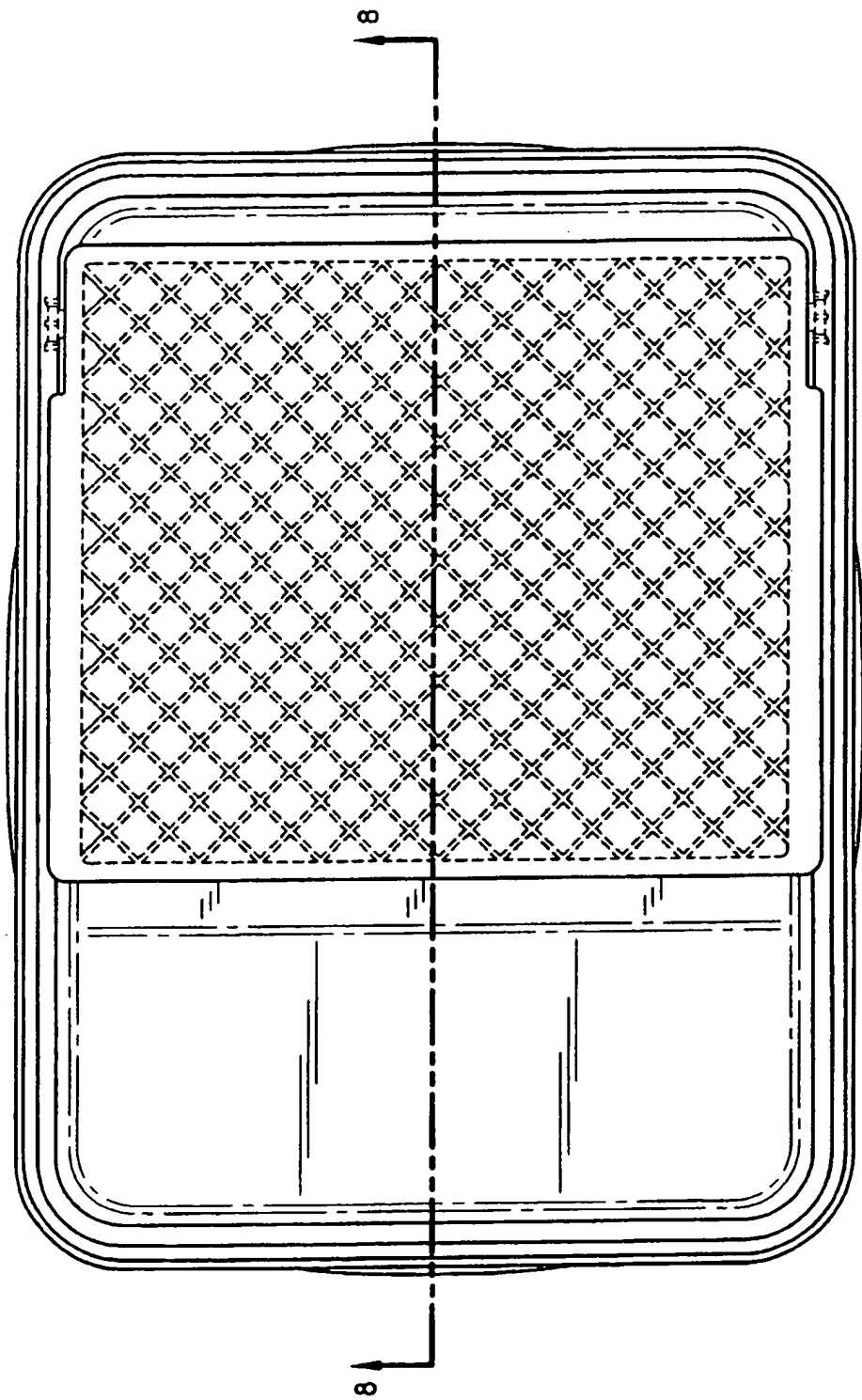


Fig. 6

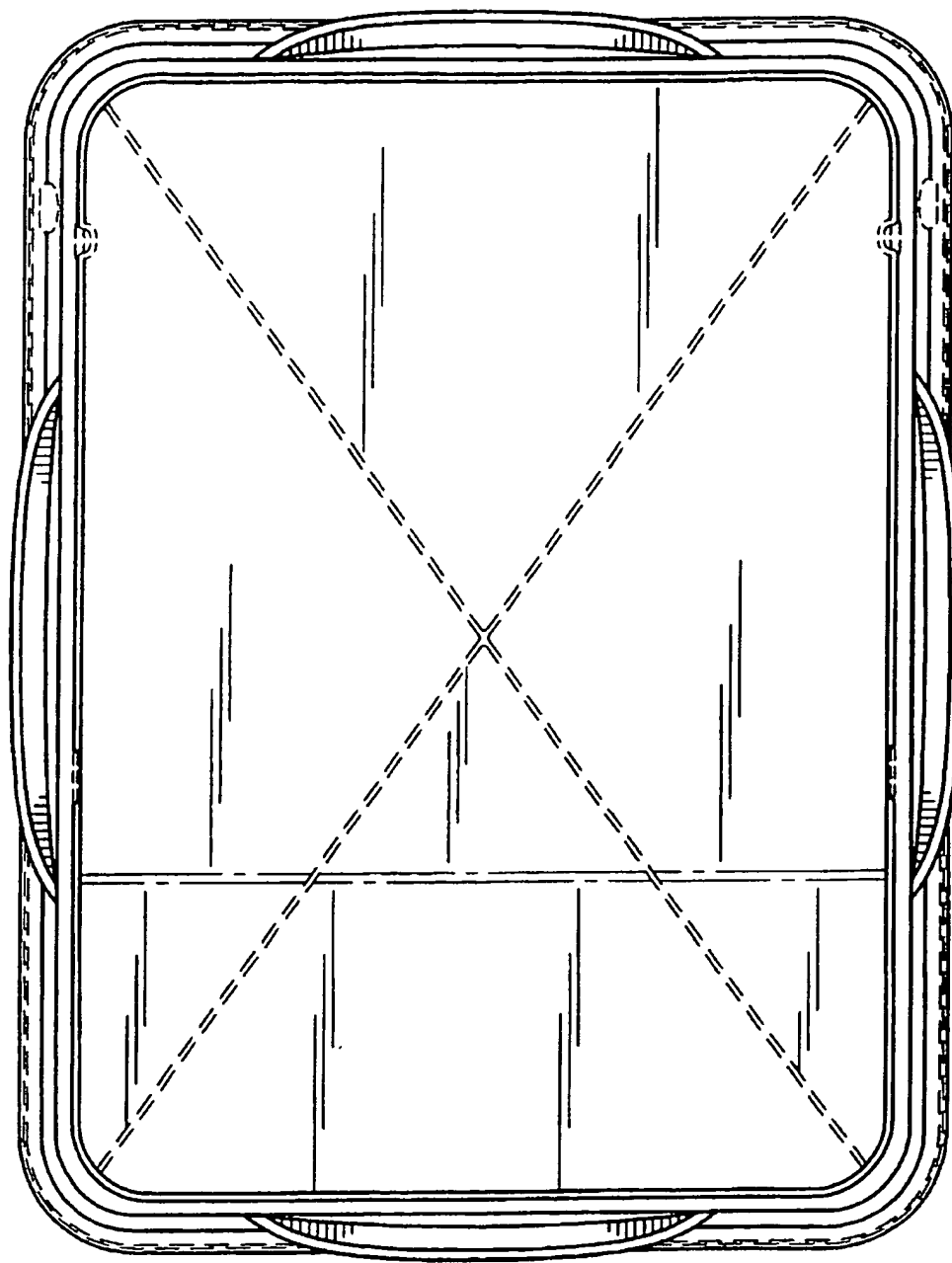
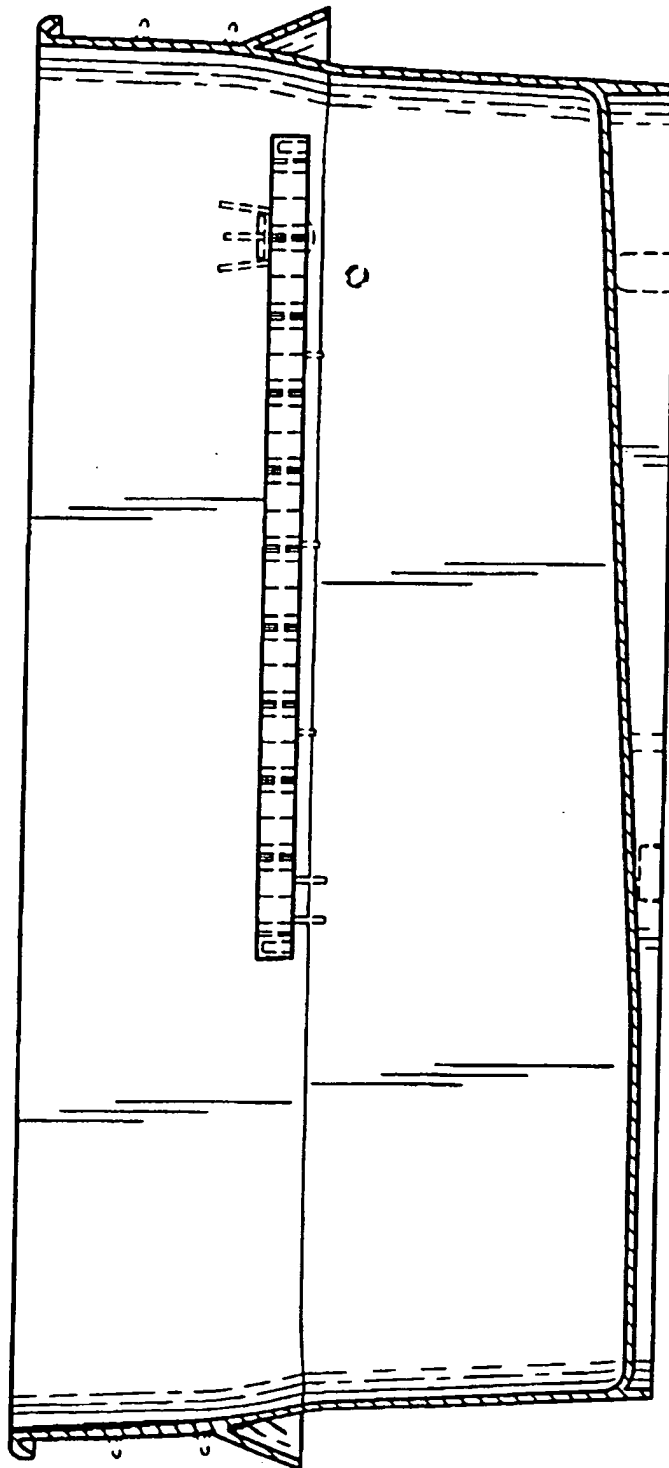


Fig. 7

Fig. 8



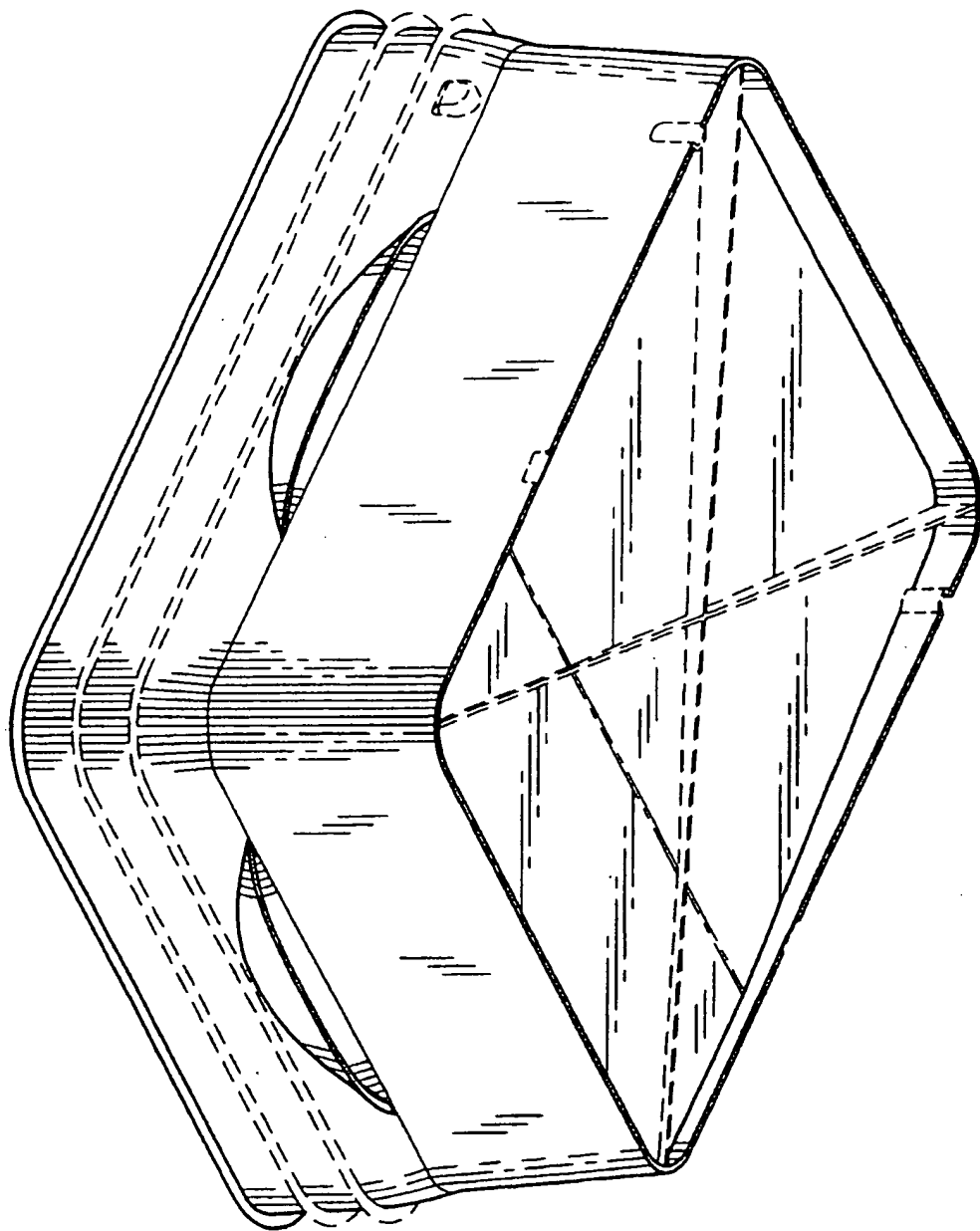


Fig. 9



US00D524003S

(12) **United States Design Patent**
Prokop et al.

(10) **Patent No.: US D524,003 S**
 (45) **Date of Patent: ** *Jun. 27, 2006**

(54) **LIQUID CONTAINER WITH FLIP-UP SURFACE**

(75) **Inventors:** Gary F. Prokop, Wheaton, IL (US);
 Randall P. Bell, River Forest, IL (US);
 Mark D. Kiel, Bensenville, IL (US)

(73) **Assignee:** Valspar Sourcing, Inc., Minneapolis, MN (US)

(*) **Notice:** This patent is subject to a terminal disclaimer.

(**) **Term:** 14 Years

(21) **Appl. No.:** 29/197,448

(22) **Filed:** Jan. 15, 2004

(51) **LOC (8) Cl.** 07-07

(52) **U.S. Cl.** D32/53.1

(58) **Field of Classification Search** D32/53,
 D32/53.1, 54; D3/302, 304, 307, 309; D7/601,
 D7/602, 630; D9/424, 425, 430-432; 206/505,
 206/518; 220/570, 600, 639, 645, 652, 660,
 220/669, 674-679, 694, 695, 697, 702; 15/257.05,
 15/257.06

See application file for complete search history.

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Primary Examiner—Alan P. Douglas

Assistant Examiner—Lavone D. Tabor

(74) *Attorney, Agent, or Firm*—Muetting, Raasch & Gebhardt, P.A.

(57)

CLAIM

The ornamental design for a liquid container with flip-up surface, as shown and described.

DESCRIPTION

FIG. 1 is an upper perspective view of a liquid container with flip-up surface showing the new design;

FIG. 2 is a left side elevation view thereof;

FIG. 3 is a right side elevation view thereof;

FIG. 4 is a rear side elevation view thereof;

FIG. 5 is a front side elevation view thereof;

FIG. 6 is a top plan view thereof;

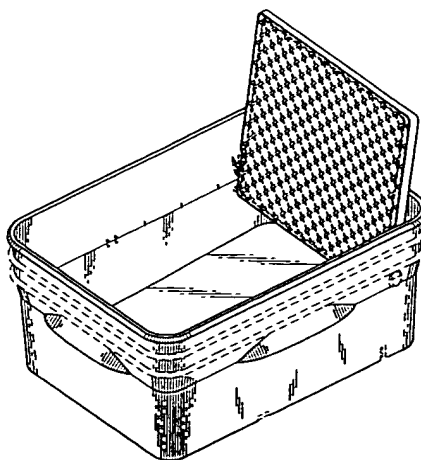
FIG. 7 is a bottom plan view thereof;

FIG. 8 is a section view thereof taken along line 8—8 of FIG. 6; and,

FIG. 9 is a lower perspective view thereof.

The features illustrated in broken lines in the figures do not form a part of the claimed invention.

1 Claim, 9 Drawing Sheets



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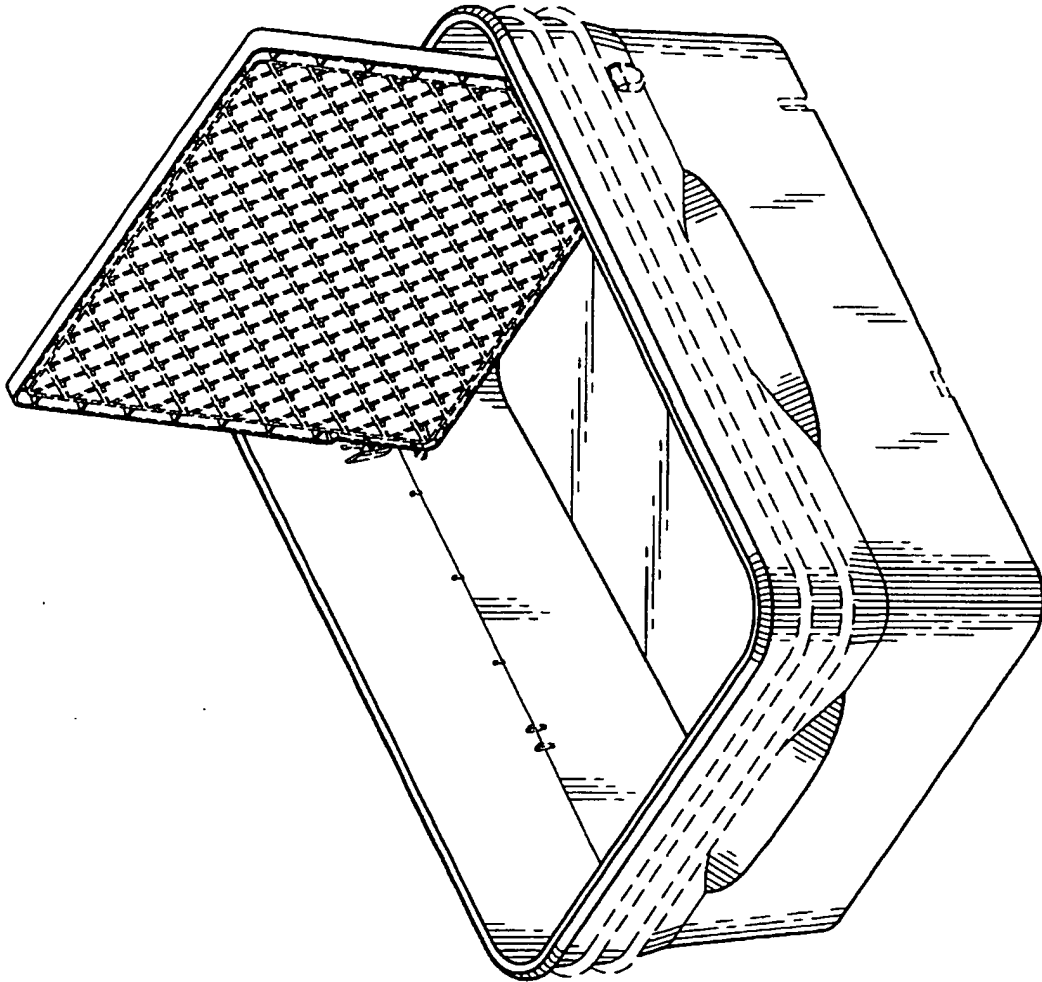
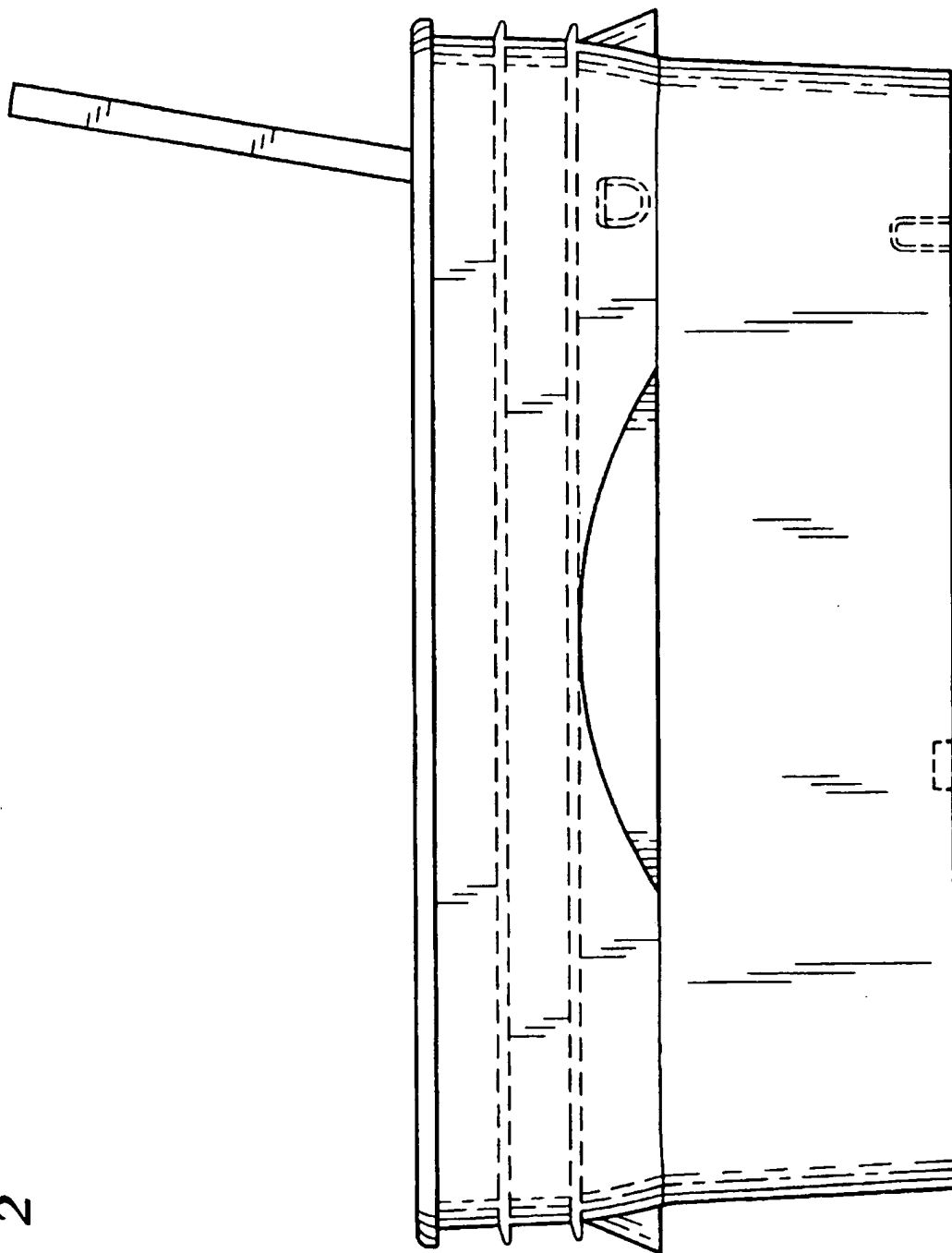


Fig. 1

Fig. 2



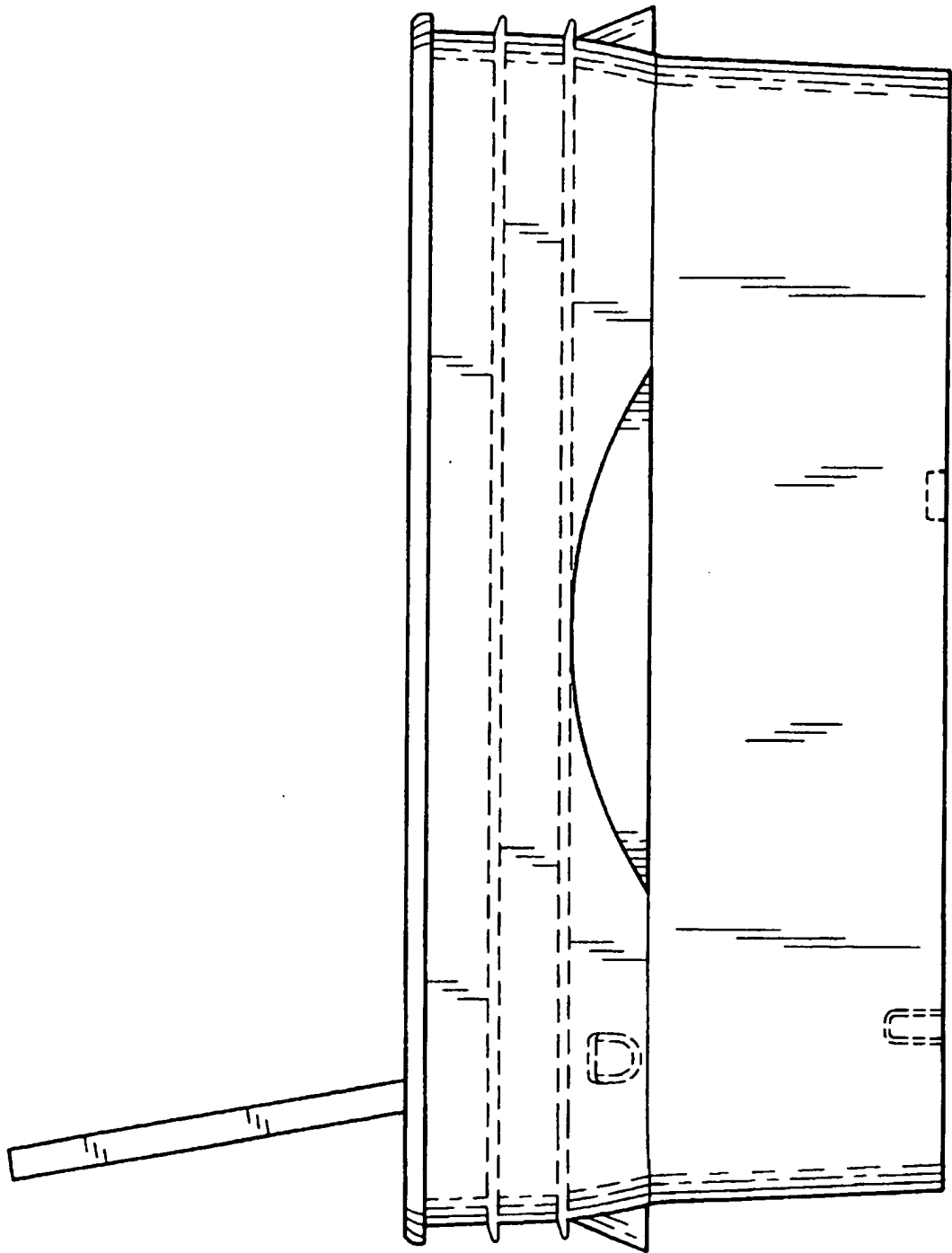


Fig. 3

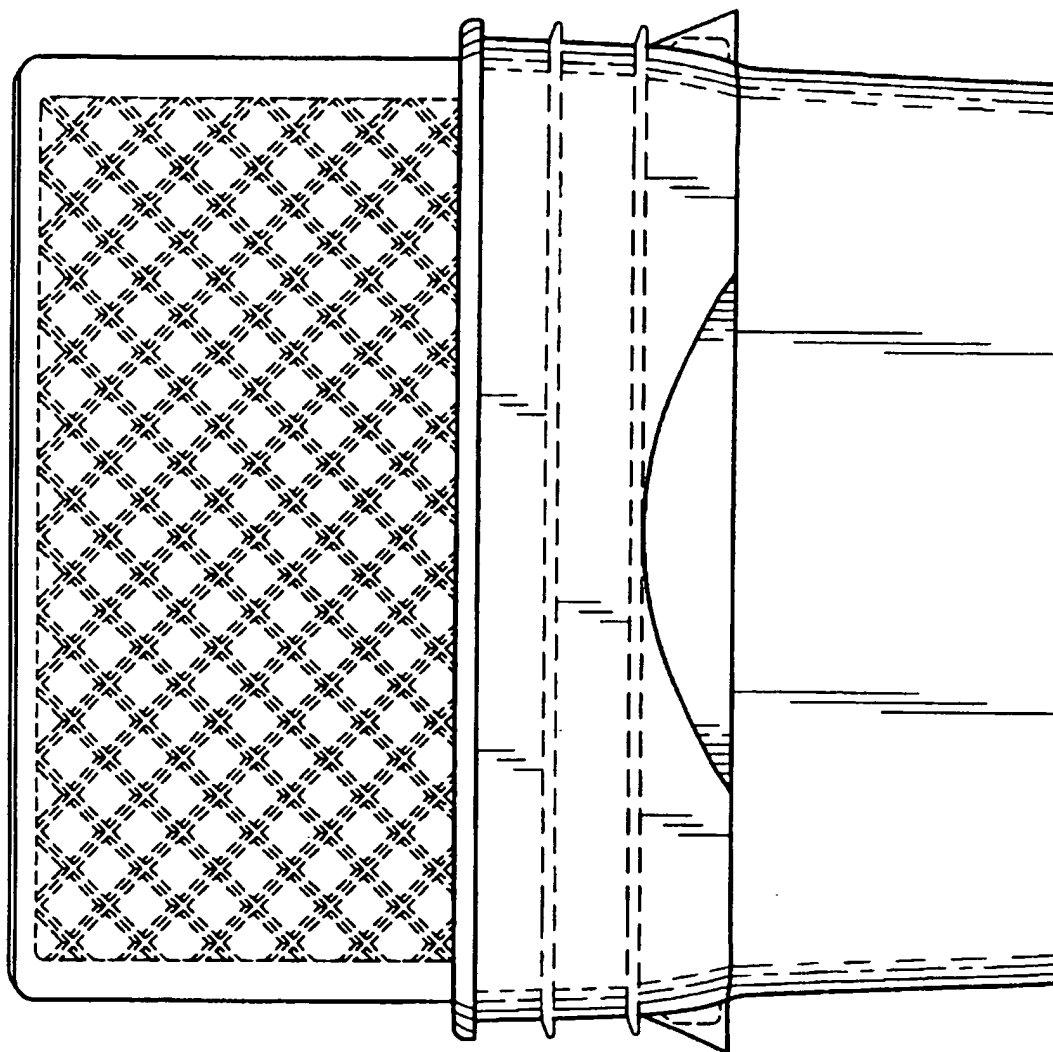


Fig. 4

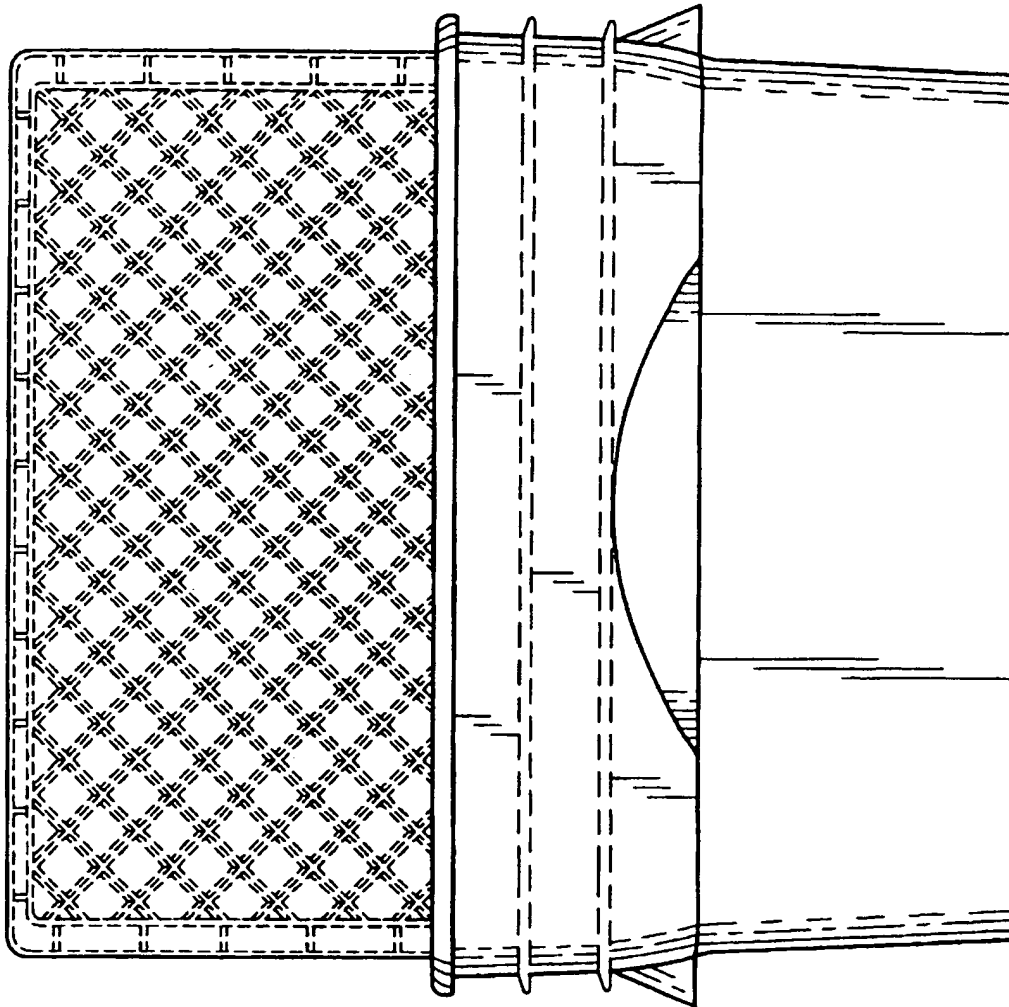
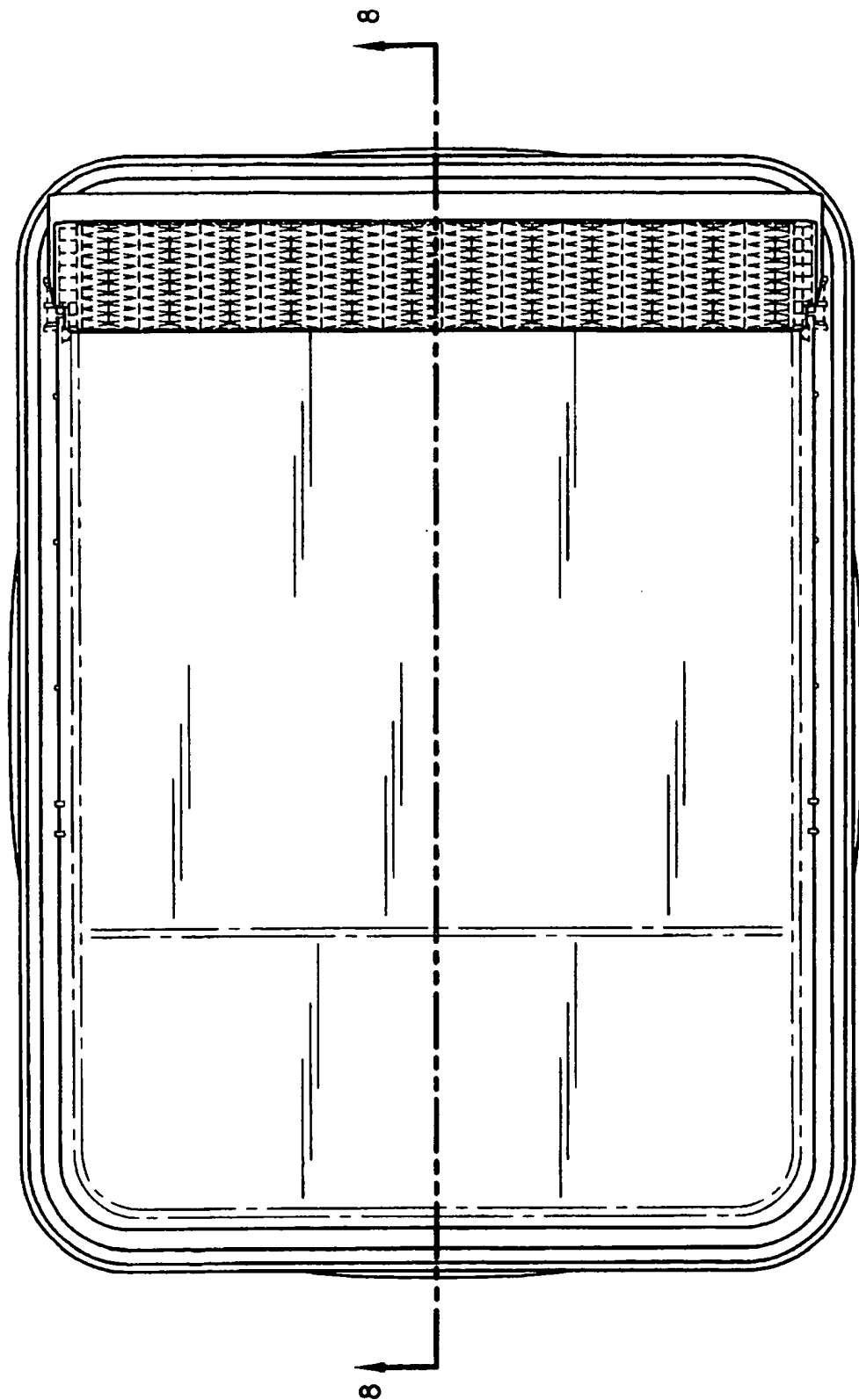


Fig. 5

Fig. 6



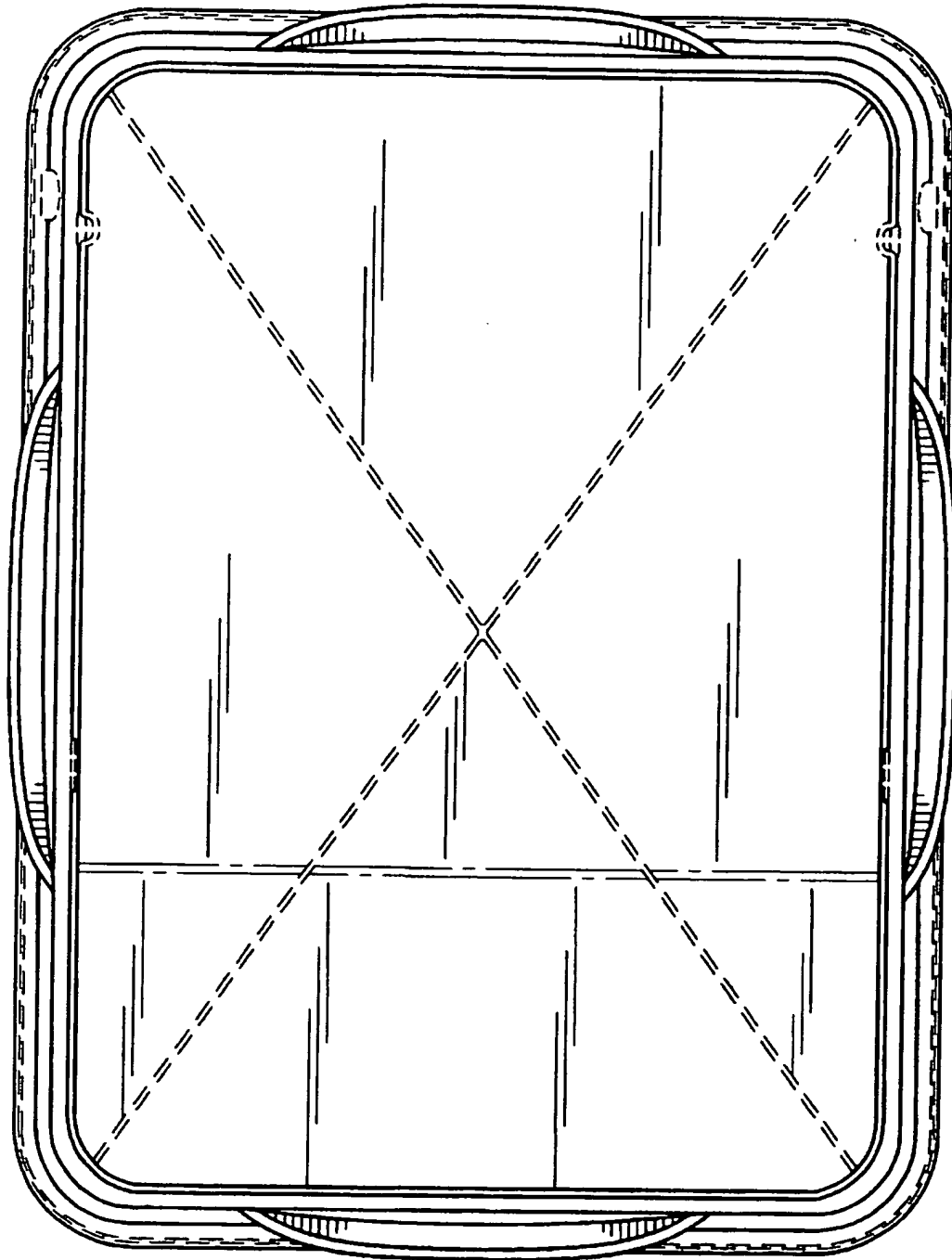
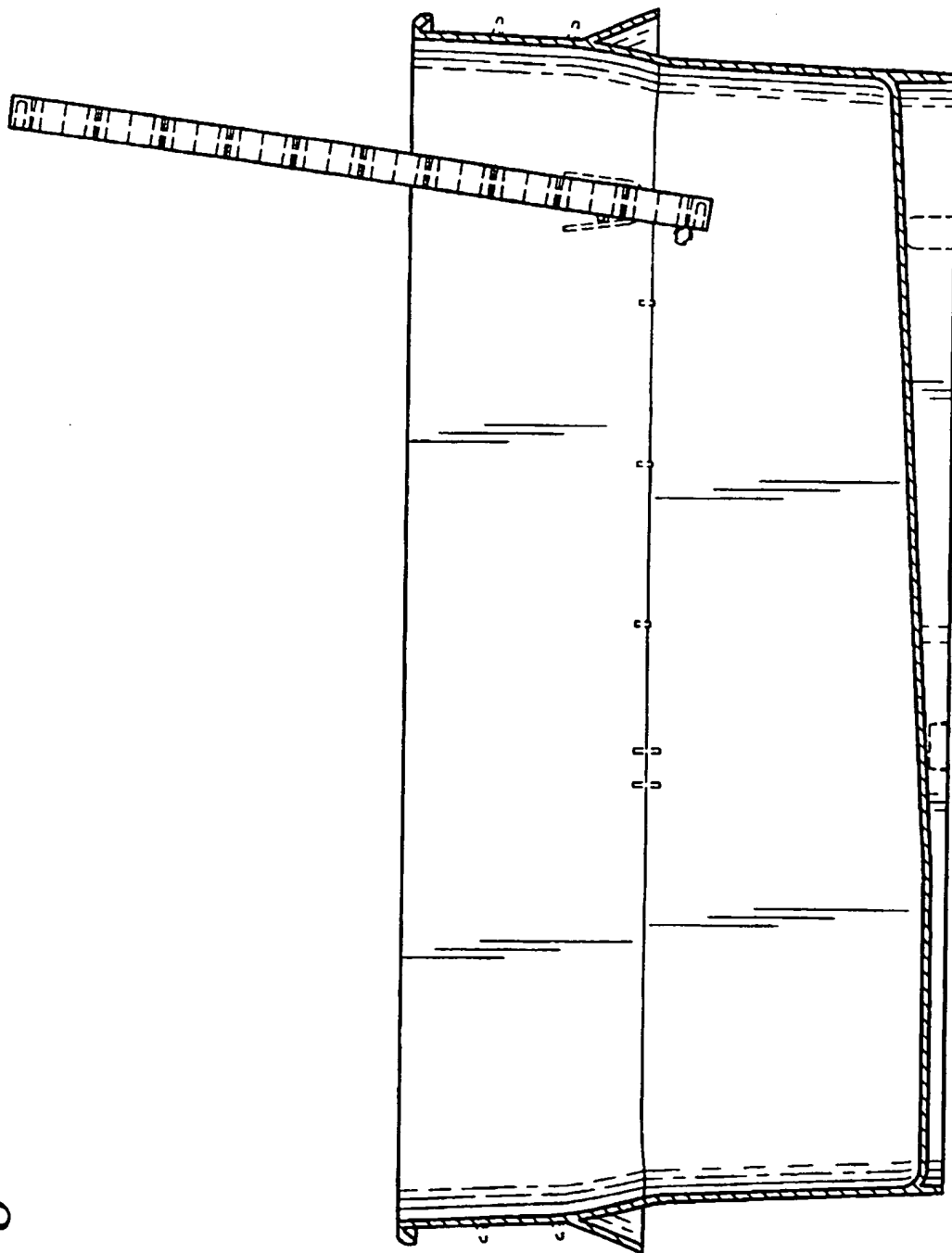


Fig. 7

Fig. 8



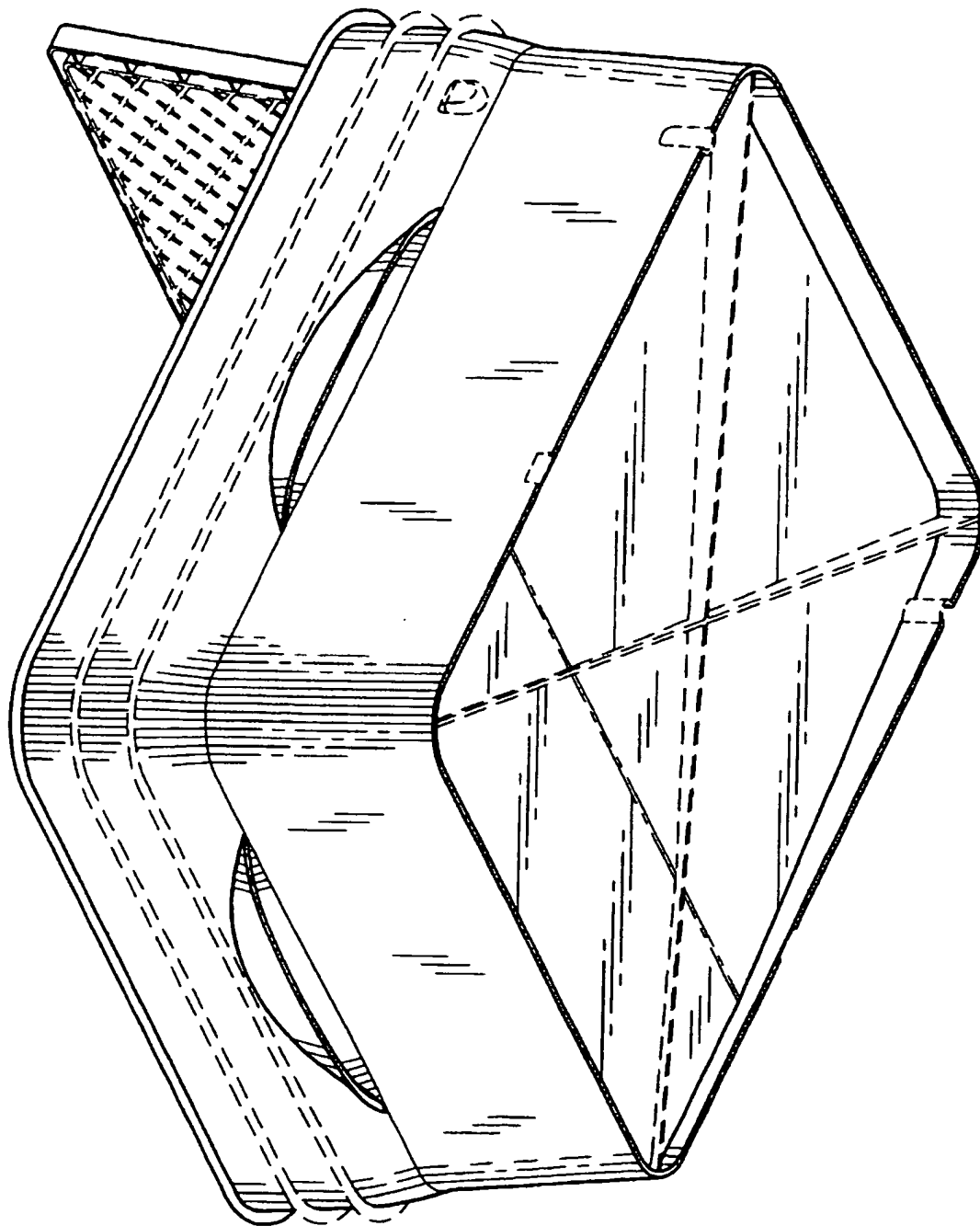


Fig. 9